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The Commission found that this merger would have likely raised competition concerns in the market for low-power CO2 lasers, as it would have eliminated Coherent's close competitor Rofin on a market with high barriers to entry and expansion. The acquisition would have left Synrad as the only main competitor alongside few and substantially smaller competitors who do not compete on par with the parties and who would not have been able to maintain sufficient competition to avoid price increases and reduced product choice.The Commission cleared the transaction subject to the divestment of Rofin-Sinar's global CO2 laser business.

Competition *merger brief*

Microsoft/LinkedIn: Big data and conglomerate effects in tech markets

Eleonora Ocello, Cristina Sjödin

In a nutshell

The *Microsoft/LinkedIn* case is an important development in the Commission's assessment of mergers involving data-related issues in tech industries.

It provides further guidance on the framework for the assessment of 'big data' issues and offers an insight into how the Commission looks at complex conglomerate issues in the tech industries.

Introduction

On 6 December 2016, the Commission approved in first phase the acquisition of LinkedIn by Microsoft subject to remedies. LinkedIn operates the well-known professional social networking platform, while Microsoft's flagship products include the Windows line of operating systems and the Microsoft Office suite of productivity software.

The main elements of interest in the *Microsoft/LinkedIn* case are the assessment of data-related issues and of several conglomerate theories of harm.

Big data, artificial intelligence and other data issues

In the era of digital economy, the importance of data is ever increasing and offers new opportunities, but also challenges, to consumers, businesses, regulators and competition authorities alike[1].

As explained in a previous issue of this Competition *merger brief*, there are two main ways in which data may come into play in the competition law assessment of mergers in the IT sector; that is to say, either as a competitive advantage of the merged entity, or in the context of privacy, as a non-price parameter of competition in the market[2]. While the Commission has assessed data-related issues in several merger cases[3], the *Microsoft/LinkedIn* case gave the Commission the chance to look at a broad range of data issues that may arise in reviewing the non-coordinated effects of a merger.

Indeed, the *Microsoft/LinkedIn* case involved the combination of two businesses that collect, store and process data about millions of users and their activity. The Commission looked at the possible effects of the combination by first identifying the products and services of LinkedIn and Microsoft where the aggregation, in various forms, of data could play a role. Second, it analysed the role of the parties' datasets in the markets involved. As a result, the Commission identified and assessed, in particular, possible horizontal non-coordinated effects in the market for online advertising as well as possible non-coordinated vertical effects related to input foreclosure in the market for customer relationship management (CRM) software solutions. Also in the context of analysing conglomerate effects in the market for professional social networking (PSN) services[4], the Commission incidentally looked at matching of LinkedIn and Microsoft user data, as a result of the integration of LinkedIn features into Office, as a possible leveraging tool which could be used by Microsoft to foreclose competing PSN providers[5].

a. Horizontal effects: "big data" issues

In *Microsoft/LinkedIn*, the Commission provided further clarity on how it assesses what is commonly referred to as 'big data' issues, i.e. the aggregation under common ownership of large sets of data, in merger cases. In the Commission's merger practice so far these issues have been characterised as

[1] In this regard, see, for example, the joint paper published by the French Autorité de la concurrence and the German Bundeskartellamt, Competition Law and Data, 2016, available at: http://www.autoritedelaconcurrence.fr/doc/reportcompetitionlawanddatafinal.pdf.

[2] E. Ocello, C. Sjödin and A. Subočs, What's Up with Merger Control in the Digital Sector? Lessons from the Facebook/WhatsApp EU merger case, Competition merger brief 1/2015, available at http://ec.europa.eu/competition/publications/cmb/2015/cmb2015_001_en.pdf

[3] See for example M.4726 - *Thomson/Reuters* (2008); M.4731 - *Google/Doubleclick* (2008); M.4854 - *TomTom/Tele Atlas* (2008); M.5727 - *Microsoft/Yahoo! Search Business* (2010); M.6314 - *Telefonica UK/Vodafone UK/Everything Everywhere/JV* (2012); M.7023 - *Publicis/Omnicom* (2014); M.7337 - *IMS Health/Cegedim* (2014); M.7217 - *Facebook/WhatsApp* (2014). More recently, see also M.8180 - *Verizon/Yahoo!* (2016), which builds on the framework of assessment formalised by the Commission in *Microsoft/LinkedIn*.

[4] In this regard see section 3.a.

[5] See M.8124 - *Microsoft/LinkedIn* (2016), paragraph 324. In this regard, see section 3.a. of this article.

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'horizontal', rather than 'vertical' in nature. This is because they arose in situations where the data was kept captive and not offered, nor expected to be offered, on the market, but was still valuable for providing certain products or services in a market where both merging parties were active (e.g. advertising).

Two situations can be distinguished under the framework of assessment applied by the Commission in *Microsoft/LinkedIn*.

The first situation is where aggregation of the merging parties' data is not possible. This can be for practical, technical, contractual[6] or regulatory reasons, such as current and upcoming data protection laws[7], which set the boundaries on the merged entity's ability to access and process data. In such a situation, even though no data aggregation occurs post-merger, competition concerns may arise if, pre-transaction, the merging companies were competing with each other on a given market (e.g. advertising) on the basis of the respective datasets that they control and this head-to-head competition would be eliminated by the merger.

The second situation is where, instead, data aggregation is possible. In this situation, competition concerns may arise if the data aggregation strengthens the market power of the merged entity in a market for providing products or services for which data is valuable, or if it increases barriers to entry/expansion for actual or potential competitors, who may need this data to provide their product or services.

In *Microsoft/LinkedIn*, the Commission applied this framework to assess the effects of the transaction on the provision of online advertising services in light of the fact that both merging parties controlled databases which can be used for advertising purposes. Indeed, Microsoft and LinkedIn both provide online non-search advertising services, while Microsoft is also active in the provision of search advertising services through its search engine Bing. Providing these services is based on analysing the data collected from each of the parties' respective users. Nonetheless, neither Microsoft nor LinkedIn currently makes available its data to third parties as a standalone product for advertising purposes. This meant that the Commission did not have to assess possible vertical effects in relation to advertising, as the transaction would not reduce the amount of data available to third parties for the provision of advertising services.

Moreover, no horizontal concerns arose when considering the two possible situations foreseen in the assessment framework. Indeed, should data aggregation not be possible, the merger would not lead to a significant loss of head-to-head competition, as Microsoft and LinkedIn are currently small players in online advertising. If, however, the aggregation of the parties' datasets were to allowed and should the parties implement it, no concerns would arise because a large amount of internet user data valuable for advertising purposes, but which is not within Microsoft's exclusive control, would continue to be available to third parties after the merger.

b. Vertical effects: data as an input

The growing importance of data is a distinguishing feature of today's digital economy. In this context, during the investigation of the *Microsoft/LinkedIn* transaction the Commission received third party complaints arguing that LinkedIn data was set to become an important input for the provision of advanced functionalities to certain software solutions through machine learning/artificial intelligence techniques. This would have been the case for CRM software solutions in particular[8], where the aggregation of the customer data already uploaded in the CRM software together with LinkedIn data (for example, on users' jobs, professional connections, etc.) could provide better insights and increase the productivity of businesses' sales forces. According to a complainant, Microsoft, which is currently a small player in the CRM sector, would gain exclusive access to LinkedIn data post-merger. This would be a competitive advantage for the merged entity in the development of advanced CRM software solutions and make it harder for competitors to compete and bring innovation[9].

To investigate this theory of harm, the Commission applied the 'vertical' framework of assessment. Indeed, while LinkedIn does not provide its data to third parties today[10], the complaint was predicated on the assumption that (i) LinkedIn would start pursuing a monetization strategy and offer its datasets to third party CRM providers, and (ii) LinkedIn data is an important input

[6] For example, in the contracts for the provision of Microsoft's professional cloud solutions, it is stipulated that the data uploaded in the cloud belong to each relevant business customer and Microsoft cannot use those data for its own business activities, let alone for advertising purposes, without third party agreement. This is a contractual hurdle to Microsoft's ability to aggregate data, pre- and post-merger. Indeed, corporate customers using professional cloud solutions place high importance on data security and are unlikely to give their consent to any data aggregation. Moreover, the threat of dissatisfying its customers could further prevent Microsoft changing its data-sharing policies. See M.8124 - *Microsoft/LinkedIn* (2016), footnote 311.

[7] For example, at EU level, Directive 95/46/EC of the European Parliament and the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and the free movement of such data ('Data Protection Directive'), OJ L 281, 23.11.1995, pp. 31-39, and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC ('General Data Protection Regulation' or 'GDPR'), repealing the Data Protection Directive, OJ L 119, 4.5.2016, pp. 1-88.

[8] CRM software solutions help companies in various industry sectors manage their customer interactions by organising, automating and synchronising data from various sources, such as sales, marketing, customer database, customer service and technical functions.

[9] A similar, but less substantiated complaint was made also with respect to productivity software (where Microsoft is present with Office). Also in that respect, the Commission dismissed any competition concerns based on the fact that access to LinkedIn data would not provide a meaningful competitive advantage to Microsoft.

[10] LinkedIn only offers a subscription-based software solution, as a standalone product which displays a subset of LinkedIn data to its users.

for providing advanced functionalities to CRM software. LinkedIn itself is not active in the provision of CRM software solutions, nor was it found to be a potential entrant in such a market absent the merger.

In this respect the Commission found that LinkedIn data could not be qualified as an important input for competing providers of CRM software solutions, and so access to that data could not give Microsoft an anti-competitive advantage over its competitors. First, machine learning-based functionalities are already offered by CRM software solutions available on the market, and these solutions currently operate without access to the LinkedIn data. Second, LinkedIn not only does not offer its data to third parties today, but it did not have any firm plan to do so absent the merger. Third, the use of LinkedIn data, before and after the merger, would still be subject to applicable data protection laws. Fourth, even if LinkedIn data were to become an input for machine learning and artificial intelligence, whilst important and useful to this end, it would be only one of many datasets which could be used to provide CRM with advanced functionalities, and alternative data sources would remain in the market.

Applying the framework for assessing vertical mergers, the Commission also assessed Microsoft's incentives to foreclose, as well as the likely impact of a foreclosure strategy on the CRM software solutions market. The Commission concluded that it was unclear whether, post-transaction, Microsoft would have any incentive to foreclose competing providers of CRM software solutions by restricting access to LinkedIn data. This conclusion is based on review of Microsoft's internal documents as well as an assessment of the likely profitability of a foreclosure strategy. Likewise, any impact on competition was excluded based on the (limited) estimated proportion of the CRM market for which LinkedIn data could be an input and on the fact that, LinkedIn data being only one of the inputs which could be used for machine learning/artificial intelligence, it was unlikely that a foreclosure strategy carried out by the merged entity would have raised barriers to entry or expansion to potential competitors.

Conglomerate effects

Microsoft is active in a number of technology markets that can be considered to be closely related to the markets in which LinkedIn is active and this gives rise to several conglomerate relationships. The Commission examined whether those conglomerate relationships could lead to foreclosure of the merging parties' competitors. It was not the first time that the Commission looked at conglomerate issues in technology markets. For example, in *Intel/McAfee* the Commission analysed a complex conglomerate theory of harm between Intel's hardware and McAfee's security solutions, which also required remedies for the merger to be cleared in phase I[11].

[11] M.5984 – *Intel/McAfee* (2011).

In *Microsoft/LinkedIn*, the Commission assessed conglomerate effects in no fewer than five distinct technology markets. In four out of these five markets – CRM software solutions, online recruitment services, productivity software and enterprise communications services – the evidence available did not point to anti-competitive foreclosure due to conglomerate effects. In only one of these five markets – the professional social networking services – the Commission was not able to exclude serious doubts of conglomerate effects. These doubts were ultimately removed by the commitments offered by Microsoft.

a. Conglomerate effects in PSN services

The Commission was concerned that the merger with LinkedIn would allow Microsoft to leverage its strong market positions from the markets for PC operating systems (OSs) and PC productivity software (tying markets) to the market for PSN services (tied market), where LinkedIn is present – thereby foreclosing LinkedIn's competitors and harming competition. Some of the key points in the Commission's conglomerate analysis are discussed below.

PSNs as a distinct product market

Establishing the precise boundaries of the product market in which LinkedIn operates was particularly important as this could directly affect the outcome of the conglomerate assessment.

Previously, the Commission had only examined market definition in relation to social networks in *Facebook/WhatsApp.* There, , however, it did not need to decide on a possible distinction based on a social network's intended use (i.e. private vs professional use).

As part of its investigation in *Microsoft/LinkedIn*, the Commission thoroughly queried market participants as to the substitutability between LinkedIn and other social networks, such as Facebook. The results of the investigation, in line with LinkedIn's own market research, revealed that consumers tend to use LinkedIn and other social networks not targeted at professionals, such as Facebook, for different purposes, namely establishing a professional identity (LinkedIn) and socialising/entertainment (e.g. Facebook). This difference in purpose is also reflected in broad differences between LinkedIn and Facebook, for example, in terms of main contacts (colleagues and business connections vs friends and family), main content posted (career-related information vs personal/leisure content), main functionalities offered (creating a detailed CV, searching for jobs, make/receive recommendations vs less professionally targeted functionalities).

The results of the market investigation also led the Commission to exclude other neighbouring markets from the market in which LinkedIn operates, such as PSNs targeted at specific professions (e.g. doctors, designers) and enterprise social networks (e.g. Yammer, Facebook Workplace).

From a geographic perspective, certain factors pointed to a national dimension of the PSN market. For example, while

LinkedIn is present across the EU, there were several instances of PSNs that target customers of some specific Member States, reflecting differences in terms of language, studies, career paths, etc. Examples included XING in Germany and Austria, Viadeo in France and GoldenLine in Poland.

Tying and interoperability issues

The Commission identified two sets of exclusionary practices that Microsoft could engage in post-merger, involving respectively its Windows OS and Office productivity software (including Outlook, Word, PowerPoint, etc.).

The first practice was reminiscent of past antitrust cases involving Microsoft insofar as it involved pre-installation on Windows PCs. Indeed, as part of its cooperation agreements with OEMs for the distribution of Windows OS, Microsoft could require OEMs to pre-install a LinkedIn application on the Windows OS PCs that OEMs distribute to users.

The second practice involved a combination of tying measures and limits on interoperability. First, Microsoft could integrate certain LinkedIn features into Office applications. Possible forms of integration include, for instance, allowing Outlook users to see information about their LinkedIn contacts within Outlook, or making suggestions for new LinkedIn contacts on the basis of the contacts in a user's Outlook address book. At the same time, Microsoft could prevent competing PSNs from integrating their features into Office. In particular, Microsoft could deny competing PSNs access to some of its application programming interfaces (APIs), which currently enable third parties to build add-ins for Office. Microsoft could also deny competing PSNs access to the Microsoft Graph, a unified set of APIs that enables applications, subject to user consent, to access data (such as contact and calendar information) from Microsoft's cloud services to provide users with certain functionality.

Both LinkedIn's pre-installation on Windows PCs and the integration of LinkedIn features into Office products had been specifically identified by Microsoft in the notification and in its internal documents as use case scenarios to promote LinkedIn post-merger. As a result, it was not necessary for the Commission to analyse extensively the technical feasibility of those practices and Microsoft's incentive to pursue them. In addition, indications of a possible incentive for Microsoft to limit interoperability were found in Microsoft's internal documents, which showed, *inter alia*, that Microsoft identified the existence of a PSN competitor in countries such as Germany as an issue and the need to grow LinkedIn as a top priority in those countries.

While no reliable data existed as to the likely impact of Windows pre-installation and Office integration on LinkedIn's position, the information available suggested that these practices (in line with Microsoft's presumed expectations) could potentially lead to a meaningful increase in the number of LinkedIn members and in user engagement on LinkedIn. Windows OS is still installed on around 80-90% of new PCs distributed in the EEA. Likewise, Office accounts for around 90% of PC productivity software in the EEA. Given the near-ubiquity of Windows and Office among PC users in the EEA, LinkedIn's tying with Windows and Office would increase LinkedIn's exposure to a very large number of users who are also subscribers or potential subscribers to LinkedIn. Taking into account that more than half of new sign-ups to LinkedIn and more than one-third of user activity occur on Windows PCs, this increased visibility was likely to drive LinkedIn's growth.

The Commission also found that competing PSNs would lack effective counterstrategies to match LinkedIn's growth. As regards Windows, OEMs may lack the ability (if constrained by Microsoft) or the incentive to pre-install a second PSN application that essentially duplicates the functionalities of LinkedIn. As regards Office, Microsoft may deny competing PSNs access to Office APIs, as described above. Moreover, competitors would not be able to sufficiently replicate the experience elsewhere as no alternative PC OS or productivity software suite enjoys a degree of user penetration comparable to Windows and Office.

The key role of network effects

On its own, the growth of LinkedIn triggered by its pre-installation and integration with Microsoft products was not necessarily considered to harm competition – were it not for the impact of network effects.

In fact, as confirmed by the Commission's market investigation, the PSN market is particularly prone to network effects: the more professionals are hosted on a given network, the more valuable the network is to its members and the more attractive it becomes to non-members.

Network effects would be likely to amplify the initial growth of LinkedIn arising from pre-installation and integration. Over time, more users would be tempted to join LinkedIn and to generate activity on LinkedIn, while the opposite would happen with competing PSNs, leading to a slowdown in the growth of their user bases and eventually to a decline in their users' activity. This trend could continue up to a point where, eventually, the market would "tip" in favour of LinkedIn's network and LinkedIn's already strong position would become entrenched.

The Commission also considered to what extent the impact of network effects could be mitigated by multi-homing (i.e. the fact that users choose to be active on more than one PSN). However, even in those Member States where an alternative to LinkedIn existed, multi-homing did not appear to be significant. Moreover, active usage of a PSN platform requires considerable time and dedication, as users need to update their profiles, and connect and interact with new professional contacts. Once PSN A becomes smaller and thus less attractive to users than PSN B, the members of PSN A who multi-home on B may not consider it worth investing the effort needed to remain active on A. The Commission also found that disruptive and timely entry may not be a realistic scenario, since the need to achieve a sizeable user base and a professional focus constitute high barriers to entry

into the PSN market, both for green-field new entrants and for existing social networks not targeted at professionals.

The degree of network effects, multi-homing and potential entry are all aspects in which the PSN market can be distinguished from the neighbouring market for consumer communications applications (apps), as examined by the Commission in *Microsoft/Skype* and in *Facebook/WhatsApp*. In those cases, network effects in consumer communications apps were found to be mitigated by the fact that interactions were mostly limited to a small number of friends and family members who constitute a person's "inner circle"[12] – which is clearly not the case for PSNs. Also, unlike with PSNs, multi-homing was found to be significant, with as many as 80-90% of consumer communications apps users in the EEA using more than one such app per month, reflecting their ease of use[13]. Finally, barriers to entry in consumer communications apps were found to be low, as shown by a long track record of new entrants, giving rise to a constant threat of new entry[14] – very much unlike the situation with respect to PSNs in *Microsoft/LinkedIn*.

Loss of privacy as a parameter of consumer choice

Regarding the ultimate impact of Microsoft's foreclosure strategy on consumers, the Commission found that the marginalisation of competing PSNs could lead to a substantial reduction in consumer choice. LinkedIn's platform would remain the only PSN service provider available to users in the EU, with no or limited prospects of entry by new PSN service providers.

In addition to the loss of consumer choice in relation to PSNs in general, the Commission found that the foreclosure of competing PSN could also impact the choice of consumers as to the level of data protection offered by a PSN. Indeed, some PSNs competing with LinkedIn, e.g. XING, are considered to offer a greater degree of privacy protection to users than LinkedIn. Therefore, XING's possible marginalisation as a result of Microsoft's foreclosure strategy would also restrict consumer choice regarding privacy.

The Commission had already considered privacy as a relevant parameter of competition in *Facebook/WhatsApp* with respect to consumer communications apps. However, in that context, the Commission found that privacy was only one of the many parameters driving user choice of consumer communications apps and that, despite its increasing importance, at that time most consumer communications apps were not competing (mainly) on privacy. Accordingly, the Commission concluded that the merger would not lead to consumer harm, including as a result of a possible degradation of privacy-related competition.

The consideration given to privacy in *Microsoft/LinkedIn* confirms that, while the enforcement of data protection rules as such falls outside the remit of the Commission's review of mergers, privacy considerations may have a role to play in EU merger control. This is most likely to be the case whenever a merger involves a market in which privacy is shown to be an important parameter in the eyes of (a significant number of) customers.

Two sets of tailored commitments

To remove the conglomerate concerns regarding possible foreclosure of competing PSNs, Microsoft offered two sets of commitments mirroring the competition concerns identified. Both sets are intended to apply throughout the EEA and to remain in effect for five years from the transaction's closing. The commitments provide for a monitoring trustee and for a fast-track dispute resolution procedure.

The first set of commitments is meant to address the concerns relating to LinkedIn's pre-installation on Windows PCs. These commitments seek to ensure that effective choice whether or not to have a LinkedIn application (or tile) installed on Windows PCs is preserved both at the OEM level (by allowing OEMs not to pre-install the LinkedIn application) and at the Windows user level (by allowing users to remove such application if installed by OEMs). As such, the commitments seek to prevent Microsoft from deciding to make the LinkedIn application automatically present on all the Windows PCs to be distributed in the course of the next five years in the EEA, thereby giving LinkedIn privileged access to a large number of potential customers in the EEA to a degree that would not be afforded to competing PSNs. At the same time, some ancillary obligations prevent Microsoft from retaliating against OEMs or entering into exclusive agreements with them to prevent them from cooperating with third-party PSNs. The commitments also seek to prevent Microsoft from circumventing the previous provisions by "pushing" the LinkedIn application to users after they have purchased their Windows PC (also as part of updates or upgrades of the Windows OS), while at the same time preserving Microsoft's freedom to promote the LinkedIn application through the Windows store standard promotional mechanisms.

The second set of commitments is meant to address the Commission's concerns regarding the possible integration of LinkedIn features into Office and the possible denial of access to Microsoft's APIs. The commitments seek to ensure that Microsoft continues to make available the Office APIs (and the related Office Add-in Program) to competing PSNs based on standard terms and policies, so as to enable them to build add-ins for Outlook and other Office products. These add-ins will be downloadable from the Office Store and will run independently of any LinkedIn features integrated into Office. The commitments also require Microsoft to continue to make available the Microsoft Graph to competing PSNs. These two interoperability obligations would enable competing PSNs to offer functionalities similar to those that Microsoft envisages introducing in relation to LinkedIn (e.g. by allowing them to display PSN contact information within Outlook and to suggest new PSN connections based on user data from Office). Finally, Microsoft committed to allow Office users to disable the LinkedIn features integrated into

[12] M.6281 – *Microsoft/Skype* (2011), paragraphs 91, 130.
[13] M.7214 – *Facebook/WhatsApp* (2014), paragraphs 110, 133.
[14] M.6281 – *Microsoft/Skype* (2011), paragraph 87 *et seq.*; M.7214 – *Facebook/WhatsApp* (2014), paragraphs 116 *et seq.*, 132.

Office on the basis of mechanisms to be made adequately accessible and prominent.

b. No conglomerate effects in other markets

As mentioned, in *Microsoft/LinkedIn* the Commission looked into a series of other conglomerate relationships between LinkedIn's and Microsoft's products. The Commission received particularly vocal complaints by a few respondents regarding the relationship between LinkedIn's sales intelligence solution, branded 'Sales Navigator', and Microsoft's CRM software. According to those complaints, post-merger, Microsoft could make the sale of Sales Navigator subject to the purchase of Microsoft's CRM software. This strategy would prevent customers of competing CRM software from accessing Sales Navigator and induce them to shift to Microsoft, thereby foreclosing other providers of CRM software.

However, the Commission ultimately dismissed the conglomerate concerns in relation to CRM software for a number of reasons. First, Sales Navigator does not enjoy a strong market position, as it appears to be only one of many alternative sales intelligence solutions available on the market. Second, even if Sales Navigator were to be considered a 'must have' for CRM customers, the pool of customers of this sales intelligence solution who also purchase CRM software solutions was too small (and was not expected to increase to any meaningful extent) for a foreclosure strategy to succeed. Third, LinkedIn was already partnering with other CRM competitors to provide its sales intelligence solution and these partnerships were likely to continue in the next years, as it would not be profitable for Microsoft to lose those important revenue streams. Finally, the Commission concluded that, even if Microsoft would have had the ability and the incentive to foreclose CRM competitors, the effect of any such exclusionary practices was unlikely to have an anti-competitive impact, as the CRM market is highly competitive and it was unlikely that (lack of) availability of Sales Navigator would be a decisive element for customers to switch their CRM software.

Conclusion

The *Microsoft/LinkedIn* case is an important development in the Commission's assessment of mergers involving data-related issues and tech industries.

The Commission's 100 page-long decision provides further guidance on the framework for the assessment of 'big data' issues in the field of merger control. It also offers an example of how the Commission deals with complex conglomerate concerns in technology markets and structures remedies to remove those concerns.

Competition *merger brief*

Wabtec/Faively - Braking News: Commission conditionally clears acquisition in train equipment sector

Réka BERNAT, Jonathan CLOVIN, Irene MIRABILE and Jani RINGBORG

In a nutshell

The Commission cleared the acquisition of Faiveley Transport by Wabtec, subject to conditions.

This case required the assessment of the effects of a merger with a potential competitor.

In phase II, the Commission fine-tuned its intervention to the strict necessities.

Introduction

On 4 October 2016, after an in-depth investigation, the Commission cleared the acquisition of French railway equipment company Faiveley Transport (Faiveley) by US-based rival Westinghouse Air Brakes Technology (Wabtec), subject to conditions[1].

The case notably required the Commission to assess the effects of a merger with a potential competitor. The Commission ultimately did not retain a number of concerns that had emerged in phase I (further to the initial assessment and complaints) but did not stand up to the assessment in phase II[2]. This shows how phase II can sometimes be beneficial to notifying parties, since it allows the Commission to fine-tune its intervention to the strict necessities.

The case concerned two of the world's largest rail equipment manufacturers and services providers. Actual overlaps and affected markets arose in products such as friction materials for train brakes and pantographs, to name but a few[3].

Most importantly, however, the Commission noted that while Faiveley was one of only two established suppliers of complete friction brake systems (and their subsystems) in the EEA (together with market leader Knorr-Bremse), there were indications that Wabtec had attempted to enter the market. The Commission was thus called to assess the importance of Wabtec as a potential competitor in the market.

In general, the Commission's investigation pointed to a very concentrated industry, with few long-established players. This historical feature has been maintained over time, given the existence of very high barriers to entry. Those are due to regulatory requirements and the fact that railway industry customers are very cautious, in order to avoid any safety risks.

Some players indicated that the railway industry in the EEA might be on the brink of major changes, with Chinese fully-integrated player CRRC expected to stir up competition. That was, however, not confirmed by the Commission's findings, which showed that long-existing Asian competitors (Japanese and Korean) have always refrained from significantly entering the EEA market.

In this article, we focus on the most interesting features of the case. We start by describing the Commission's assessment of potential competition in merger control, in particular the relevant legal standard. We then summarise the elements that led the Commission ultimately not to retain concerns in the market for complete brake systems (and subsystems). As regards friction materials, we touch on the competition concerns raised in relation to the horizontal overlaps and the reasons why we dismissed concerns about vertical foreclosure risks. Finally, we briefly describe the remedies accepted in Phase II to cure horizontal concerns in friction materials.

[1] M.7801 – *Wabtec/Faiveley Transport*.

[2] To initiate proceedings in Phase I, the Commission only needs to find that a concentration raises serious doubts as to its compatibility with the single market. In Phase II, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it, in particular through the creation or strengthening of a dominant position.

[3] The relevant markets in this transaction were the EEA markets for: (i) complete friction brake systems and their subsystems; (ii) friction materials (for train brakes); (iii) brake discs; (iv) pantographs; (v) train doors; (vi) energy meters; and (vii) event recorders. Affected markets arose with respect to all of those products except train doors, energy meters and event recorders. The transaction also gave rise to vertically affected markets between the parties' activities in friction materials (upstream) and activities in complete brake systems (downstream).

The content of this article does not necessarily reflect the official position of the European Commission. Responsibility for the information and views expressed lies entirely with the authors.

Competition

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Potential competition: the legal standard

In merger cases, the Commission is sometimes called to assess the effects of potential competition or entry into a market. In this context, two categories of entry can be distinguished: (i) situations where one of the parties to the transaction would have made an entry absent the transaction; and (ii) situations where a third party is likely to make an entry. The former will call the Commission to assess whether the merger would cause competition problems due to the elimination of the entry, while the latter involves situations where an entry by a third party can counteract any negative effects on competition that the merger may bring.

The *Wabtec/Faiveley Transport* case involved a situation where one of the parties, Wabtec, was attempting to enter the European market for complete friction brake systems. The Commission thus needed to assess whether the transaction would have significantly impeded effective competition by removing Wabtec as a potential entrant.

It is worth recalling that a merger with a potential competitor can have horizontal anti-competitive effects in two situations: (i) when the potential competitor already significantly constrains the behaviour of the firms active in the market; or (ii) it is likely to enter the market in a relatively short period of time, after which it would constrain the behaviour of firms currently active in the market[4].

In both scenarios, for the merger to have significant anti-competitive effects, two basic conditions must be fulfilled. First, the potential competitor must already exert a significant constraining influence, or there must be a significant likelihood that it would grow into an effective competitive force. Evidence that a potential competitor has plans to enter a market in a significant way could help the Commission reach such a conclusion. Second, there must be an insufficient number of other potential competitors, which could maintain sufficient competitive pressure after the merger[5].

The Commission's decision reaffirms that what constitutes an appropriate *"relatively short period of time"* in such a case depends on the characteristics and dynamics of the market (and specificities of the relevant industry), as well as on the specific capabilities of the potential entrant. This can mean, for instance, that entries into markets where the typical product cycle is short need to be faster than in markets where the product cycle is long for the Commission to take the entry into account in its merger assessment.

In this context it should be noted that the time periods considered may depend on the particular circumstances. Arguably, they may differ when the potential entrant is one of the merging parties compared to situations where a third party entrant acts as a constraining factor on the merged entity's market power[6].

For the latter cases, namely entry by a third party constraining the market power of merging parties, the Commission's Horizontal Merger Guidelines indicate that normally only entries that take place within two years would be sufficiently swift to be considered[7]. This time limit is not absolute – it leaves space for the specific circumstances and the Guidelines note that 'normally' two years is the maximum.

That provision only refers to entries by a third party and not those by a party to the transaction. This is shown by the phrasing of the relevant paragraph in the Guidelines, which explicitly discusses entries that *'would be sufficiently swift and sustained to deter or defeat the exercise of market power*[8]. Similar wording is missing from the section of the Guidelines that discusses entry by the parties to the transaction.

The authors consider that there are good policy reasons for adopting a strict timeframe for situations where entry by a third party needs to be assessed in the context of it functioning as a counterweight to the merged entity's market power[9]. In cases where entry by one of the parties to the merger is assessed, in order to ascertain whether the transaction removes a competitive constraint, it seems less appropriate to indicate a pre-set period of time. The Commission should look at all the reasonably probable effects of the merger and not ignore possible negative

[4] Horizontal Merger Guidelines, OJ C 31, 5.2.2004, p. 5., paragraph 59.

[5] Horizontal Merger Guidelines, paragraph 60.

[6] See for instance *Deutsche Bahn / English Welsh & Scottish Railway Holdings (EWS)* where the final commitments included the carrying out of expansion plans within five years, M.4746 – *Deutsche Bahn / English Welsh & Scottish Railway Holdings (EWS)*, paragraphs 104–114; and *Gaz de France / Suez*, where concerns related to an operator that was *best placed* to enter the market, M.4180 – *Gaz de France / Suez*, particularly paragraphs 391, 400 and 479; and M.1630 – *Air Liquide / BOC*, paragraph 66. See also for a similar line of reasoning the Commission Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, OJ C 11, 14.1.2011, p. 1, paragraph 10, footnote 3 ("*[w]hat constitutes a 'short period of time' depends on the facts of the case at hand, its legal and economic context, and, in particular, on whether the company in question is a party to the agreement or a third party. In the first case, that is to say, where it is analysed whether a party to an agreement should be considered a potential competitor of the other party, the Commission would normally consider a longer period to be a 'short period of time' than in the second case, that is to say, where the capacity of a third party to act as a competitive constraint on the parties to an agreement is analysed. For a third party to be considered a potential competitor, market entry would need to take place sufficiently fast so that the threat of potential entry is a constraint on the parties' and other market participants' behaviour"*).

[7] Horizontal Merger Guidelines, paragraph 74.

[8] The context in which this provision is placed in the Horizontal Merger Guidelines confirms this point.

[9] These are situations where, absent entry (or at least of a threat thereof), the merged entity could exercise market power to the detriment of effective competition. The longer such entry would take to materialise, the weaker a constraint it would likely be and the longer the interim period between the loss of competition resulting from the merger and the constraining entry would become. This would make the loss of competition more profound and increase the likelihood that consumers are hurt.

effects that might materialise in full only after some period of time, as long as they can be predicted with the required degree of certainty.

This is not to say that the Commission could, in practice, look at very distant events. The Commission is to confine itself to events that might take place within '*a relatively short period of time*'. In general, time normally adds uncertainty and requires convincing evidence that the entry would have indeed happened, absent the merger.

Application of the standard to this case

Brake systems are key safety systems of any train vehicle, and their basic function is to slow down or stop the train when required. There are a number of different technical solutions to achieve that, such as friction brakes, magnetic brakes and dynamic brakes. This transaction concerned friction/service brakes.

They function by transforming the train's kinetic energy into heat through the application of friction materials against a brake disc or directly on the wheel treads of a train vehicle. The main components of friction brake systems are (i) the bogie brake, which is the mechanical brake and can consist of disc brakes and/or tread brakes, and (ii) a brake control system that manages the brake function through a pressure medium, which is either compressed air (pneumatic brakes) or a liquid (hydraulic brakes). Pneumatic systems also require (iii) an air supply unit (air compressor and air dryer). Together these elements constitute a complete brake system.

A complete pneumatic friction brake system can be electronically controlled (electro-pneumatic) by an electronic brake control subsystem. The demand in passenger applications in the EEA is, for the most part, focused on complete electro-pneumatic brake systems, since such systems have numerous technical advantages, such as better reaction time and upgradability.

In the Wabtec/Faiveley Transport case, the evidence gathered in phase I gave reason for the Commission to have concerns that the merger would remove Wabtec as a potential entrant in the market for complete electro-pneumatic brake systems. This market is currently served mainly by only two competitors: Faiveley and Knorr-Bremse.

In phase I, the Commission had found elements suggesting that Wabtec's entry would likely happen within four to six years. In phase II, the Commission confirmed that a timeframe of four to six years would have constituted a *'relatively short period of time'* in the context of this industry. This was justified by the Commission's finding that usual timelines for developing and homologating new products were long in the industry. In addition, product life in this market spans a considerable number of years, much longer, for instance, than fast-moving consumer goods (for example, one of Faiveley's complete brake systems currently offered on the market was introduced 12 years ago).

However, the prospects of Wabtec actually entering and becoming a significant constraint on Faiveley and Knorr-Bremse within that timeframe were not confirmed during the phase II investigation.

First, Wabtec's original product for entry to the complete electro-pneumatic brake systems market was developed outside Europe and was found unlikely to ever be suitable for the EEA[10]. The phase II investigation did not reveal any concrete plans to redesign it so that it would become technically and commercially suitable for the EEA.

Second, it was found that Wabtec's European arm (Poli) had been developing a complete electro-pneumatic brake system suitable for the EEA, potentially on par both technically and commercially with Faiveley's and Knorr-Bremse's current products. Aggressive plans had been made to finalise the product. However, key elements of that product turned out to be either missing or late.

Wabtec also did not appear to have any concrete orders for the sale of those products in the EEA.

Third, during phase II, it emerged that Faiveley had its own plans to introduce a new range of products in complete brake systems for metros that had already been produced and was being tested. The product included a number of technical innovations that not only made the product easier to install and use but, in certain configurations, would enable customers to use fewer brake control units than with previous products, lowering costs significantly in those situations. According to the parties, the Faiveley product was a 'game changer' from a technological and commercial standpoint. The new product was already far more developed than Wabtec's and had already been presented to major customers. Customers had generally expressed positive views about the new product even if they had been cautious, pending further information on the product.

The development of Faiveley's new product led the Commission to reconsider the likelihood of Wabtec's entry into the market. In essence, it seemed that the barrier to entry for Wabtec was higher than thought before, both technically and commercially, making entry more uncertain.

Finally, the phase II investigation also revealed a higher degree of substitutability between complete brake systems and subsystems than was previously apparent, possibly giving customers more alternatives and implying lower barriers to entry. Major customers showed that they had been able to integrate subsystems from subsystem manufacturers with their own control systems.

Therefore, the elements uncovered in the phase II investigation pointed to Wabtec's entry being more remote and less certain than it appeared in phase I, and that some competitive pressure was likely to be maintained after the merger through the customers' ability to integrate elements from subsystem manufacturers. This resulted in the Commission concluding that it

[10] Its main attributes make it unfit for European customers' requirements.

was not shown to the requisite standard that Wabtec would already have had significant constraining influence in the market or that it would have grown into an effective competitive force.

Friction materials: vertical relations, horizontal concerns

Friction material is an essential part of the brake which causes a train to slow down or stop by pressing the friction material to the brake. There are different types of friction materials, according to the type of brake on which they are used (that is: pads, which are used on disc brakes; and blocks/shoes, which are used on tread brakes) and the ingredient which they are composed of (e.g. sintered, organic). The Commission focused its investigation on sintered and organic pads and blocks.

Wabtec manufactures and sells both sintered and organic friction material to the brake manufacturers (i.e. original equipment market, OEM) as well as spare parts to rolling stock manufacturers or train operators (i.e. independent after-market, IAM). By contrast, Faiveley only manufactures and sells sintered friction materials to the IAM and purchases organic materials from the market.

The investigation focused on three areas: horizontal overlap and risk of input foreclosure in connection with sintered friction materials, and risk of customer foreclosure mainly in relation to organic friction materials.

First, the Commission investigated whether the transaction would stiffen competition in the IAM supply of sintered friction materials. The investigation revealed that the transaction would strengthen the parties' dominant position in the IAM supply of sintered pads and blocks. The merged entity would face competition only from Federal Mogul, which is however perceived as a distant competitor. The IAM markets for sintered friction materials, especially pads, are very concentrated and characterized by high barriers to entry, due mainly to homologation requirements. Dual-sourcing, requested by train operators to spur competition, barely takes place in relation to sintered friction materials due to very strict technical requirements and lack of sufficient alternative suppliers. The Commission therefore concluded that the transaction would remove Faiveley as an important source of competition in these markets, leading to a three-to-two merger.

Second, the Commission investigated whether the merged entity would have the ability and incentive to raise prices or restrict supply of a certain type of sintered friction material vis–à-vis Knorr-Bremse, Faiveley's rival in the downstream market for the supply of complete brake systems. The investigation indicated that the risk of input foreclosure was very unlikely to materialize, since Wabtec and Knorr-Bremse had entered into a supply agreement securing Knorr-Bremse's demand for sintered friction materials for past and current projects. As regards future projects, Knorr-Bremse would likely have the ability and incentives to timely and progressively reduce its dependency on the merged entity's input.

Third, pre-transaction, Faiveley mainly procured (organic) friction materials from non-integrated suppliers, such as Federal Mogul. The Commission thus investigated whether the merged entity would have the ability and incentives to restrict the access to its OEM customer base to friction material suppliers (as Faiveley may procure friction materials exclusively from Wabtec going forward). In light of the results of the market investigation, the Commission ruled out this risk, essentially because Faiveley would lack market power in the downstream market for the supply of brake systems, where Knorr-Bremse is a leader. In addition, the ability of rival suppliers of friction materials to supply the more valuable IAM would not be significantly affected by the vertical integration of Wabtec and Faively at OEM level. This is illustrated by the market structure pre-merger, which was characterized by several non-integrated suppliers of friction materials serving the IAM without necessarily being present in the OEM. Finally, rolling stock manufacturers and train operators may counter-act any attempt by the merged entity to raise the costs of rival suppliers of friction materials by resorting to dual-sourcing, which is much more common for organic friction materials than for sintered friction materials.

Remedies

To address the competitive concerns raised in relation to the horizontal overlap between the parties' activities in the IAM for sintered friction materials, the parties offered to divest Faiveley's entire friction material business (FTG).

FTG includes friction material for rail, but for other purposes as well (for instance motorcycles), and its divestiture would entirely remove any overlap between the parties.

The market test of the first remedy package offered by the parties pointed to several shortcomings relating to the ability of FTG to be a viable and effective competitor once severed from Faiveley, which have been subsequently addressed.

First, to ensure that the current account debt owed by FTG to Faiveley does not hinder the viability of the divested business or its independence from Faiveley, the commitments provide that, at the purchaser's option, the purchaser will be able to acquire the intra-group debt of FTG at a set maximum price.

Second, to incentivize the purchaser to carry out the necessary R&D investments in the area of sintered friction materials for railway applications, the sale and purchase agreement will include an incentive scheme, to be approved by the Commission.

Third, to ensure that FTG will be able to sell internationally, the purchaser criteria set out in the commitments have been broadened to include the purchaser's ability to sell internationally to railway industry customers.

Concerns linked to the fact that FTG would not be able to compete after being severed from a complete electro-pneumatic brake systems supplier did not pass muster. First, FTG was originally a standalone business that had achieved market presence in friction materials without being vertically integrated with a complete brake systems manufacturer. Second, Wabtec, as a relatively recent entrant in the EEA friction materials, offered another natural experiment of a non-vertically-integrated competitor achieving significant market presence in the IAM EEA friction materials markets.

The Commission concluded that the divestiture of FTG would create a new independent non-integrated supplier of friction materials with the necessary infrastructure, production facilities, expertise and know-how, which could effectively compete against the merged entity as an IAM supplier of sintered friction materials.

FTG was successfully sold to an independent French producer of friction materials, Flertex, in February 2017[11].

V. Conclusion

The Wabtec/Faiveley case illustrates the Commission's legal test applicable to potential competition cases, in the context of an oligopolistic market, characterized by high barriers to entry due to technical and safety requirements. Besides, the case assesses the effects of the merger on a number of markets in the train equipment sector that have initially led to both horizontal and vertical competition concerns. A number of these concerns were dropped, after a rigorous factual assessment in phase II. The remedies offered to cure the significant impediment to effective competition in the IAM market for the supply of sintered friction materials will enable entry in a market which is highly concentrated, to the benefit of rolling stock manufacturers, train operators and, ultimately, passengers.

[11] http://flertex.fr/acquisition-de-faiveley-transport-gennevilliers-par-flertex/?lang=en

Competition *merger brief*

Boehringer Ingelheim/Sanofi Animal Health - The timely injection of a fix-it-first remedy

Marion Bailly and Justin Gibbs

In a nutshell

The acquisition of Sanofi's animal health business by Boehringer Ingelheim led to competition concerns in a number of animal vaccine and pharmaceutical markets. The remedy put forward included a technology transfer of vaccines, a highly complex process which can lead to implementation risks.

However the presence of a suitable purchaser fulfilling the strict criteria required to carry out a successful transfer, the robustness of the technologies to be transferred, and a thorough Phase 1 process made it possible for the Commission to approve a fix-it first-remedy in Phase 1.

Overview

In December 2015, Boehringer Ingelheim (BI, Germany) and Sanofi (France) decided to enter into an asset swap whereby BI would take over Sanofi's animal health business (also known as Merial) in exchange for BI's consumer healthcare business together with €4.7 billion to be paid to Sanofi 1. By carrying out this asset swap, both companies aimed to focus on their core expertise.

This article describes the challenges raised by BI's acquisition of Merial, which created the number two animal health player globally. More specifically, the Commission's review of the transaction revealed that it could create competition concerns for several animal vaccines (for swine and bovine) as well as for some anti-inflammatory drugs for animals.

The main challenge of this case was to find an appropriate remedy to solve the concerns in relation to animal vaccines. This is because the problematic vaccines were produced in a facility where many other vaccines were manufactured. Further, transferring production of biological material to another location is generally extremely complex due to the issues with reproducibility of biological processes in a new environment.

After first notifying on 8 June 2016, BI offered to transfer the technology used for the production of the problematic vaccines to a suitable purchaser. However, the Commission's market test of this initial proposal in July 2016 was negative. It called into question the likely success of the transfer of antigen (a harmless substance in a vaccine that stimulates an immune system response) production and underscored the importance of the purchaser's expertise in the relevant production technology, as well as of the equipment in the destination facility. Following those results, BI decided to withdraw the notification. The Commission investigated further to assess the feasibility of technology transfers for the vaccines concerned. This included consulting independent experts who analysed the production data to assess the stability and reproducibility of the processes. After the Parties re-notified the transaction in September 2016, they also improved the remedy proposal by putting forward an experienced purchaser, Ceva Santé Animale (Ceva, France).

The case was ultimately cleared in November 2016, subject to the divestment of a number of Merial's global vaccines and European anti-inflammatory drugs businesses. To conclude on the feasibility of the technology transfer of Merial's vaccines to one of Ceva's plants, the Commission assessed Ceva's suitability and approved Ceva as a suitable purchaser in its Phase 1 clearance decision (fix-it-first).

Many species of theories of harm

Presentation of the animal health sector

The animal health sector can generally be divided into three main areas: vaccines, pharmaceuticals and feed supplements. The main overlaps in this case concerned vaccines and pharmaceuticals.

The main areas of the animal health sector present some common general features, notably the free setting of prices

[1] The acquisition by Sanofi of BI's consumer healthcare business was conditionally cleared in Commission decision M.7919 of 4 August 2016.

The content of this article does not necessarily reflect the official position of the European Commission. Responsibility for the information and views expressed lies entirely with the authors.

(unlike in human health) which enhances the risk of price increases in case of consolidation. Each area, however, has its own dynamics. For instance, there is a degree of penetration of generics in the pharmaceuticals space (similarly to human health, albeit not always as significant), while vaccines, being biological drugs, cannot be copied. As a result, competition in the vaccines area is strongly driven by innovation. Animal health markets typically have a national geographic scope.

One interesting feature of this case is that competition concerns were identified based on various theories of harm because of the very specific competitive dynamics in each market, as explained below.

Vaccines

Vaccines protect animals against future diseases or illnesses caused by exposure to pathogens. Within vaccines, markets are primarily defined according to the targeted species and diseases. Vaccines are then differentiated by taking into account, for instance, whether they are composed of a live pathogen (modified to be non-virulent) or a killed pathogen (inactivated), their frequency of administration, and possible targeted sub-groups within a species.

The main overlap between the Parties' activities in this case related to vaccines against porcine circovirus (PCV2), a very profitable market since nearly all herds globally are vaccinated against this virus. On this market, the merger would have reinforced BI's existing dominant position. BI's market shares are approximately 50-60% at the EEA level and up to 80-90% in some European countries, with Merial being the third player at EEA level with approximately 10-20% of market share. The investigation also showed that Merial had an aggressive pricing policy for its PCV2 vaccine. The theory of harm for PCV2 vaccines was therefore a textbook case of a risk of price increase and reduced choice post-merger due to the strengthening of a dominant position[2].

The transaction also raised competition concerns in relation to the market for vaccines against porcine reproductive and respiratory syndrome (PRRS). The theory of harm in this market was focused on the loss of innovation[3]. Indeed, with respect to PRRS, a disease which has not yet been fully mastered, competition was characterised by a race to launch a more effective vaccine. The innovative projects and recently launched products of BI and Merial held, or were expected to hold, promising competitive positions. Therefore the Commission considered their combination within one entity would bring serious risks of loss of innovation and ultimately of price and product competition.

Competition concerns were also identified in relation to bovine viral diarrhoea (BVD) vaccines. In that market, BI recently launched two new products and was expected to achieve a leading market position in the near future. Merial's product was its closest competitor, with a product having similar claims and characteristics (live, single dose, cross protection against several types of BVD). The Commission thus considered that because of BI's strong market position and Merial's product being a close substitute, the merger would lead to a risk of price increase and reduced choice for customers[4].

Anti-inflammatories

The merger also led to significant overlaps in the area of anti-inflammatory drugs, pharmaceuticals used to treat inflammation and to reduce pain and fever. More specifically, the Commission investigated the possible impact of the merger for non-steroidal anti-inflammatory drugs (NSAIDs) in injectable form (multi-species) and in tablets (for pets and horses).

One of the main preliminary conclusions in this case was that although NSAIDs are genericized markets, generic penetration is not as high as one would expect in a free pricing market. This was mainly because of strong brand recognition amongst the veterinaries in these markets. In particular, BI's *meloxicam* originator product (Metacam) was still leading the markets. Merial's *firocoxib* products are differentiated from those of competitors because they are based on an innovative mechanism (called COXIBs). The Commission concluded that while sufficient competition would remain for oral NSAIDs for pets (the most lucrative market with more competitors, including Zoetis with its product Rymadil), this was not the case for multi-species injectable NSAIDs and oral NSAIDs for horses, for which serious doubts were raised.

Technology transfer: an acceptable remedy?

Presentation of a vaccine technology transfer

In order to address the Commission's concerns, BI put forward a remedy proposal which included the transfer of the production processes and technologies used for Merial's PCV2, PRRS and BVD vaccines[5]. There are two steps in the vaccine manufacturing process: upstream manufacturing (antigen production) and downstream manufacturing (filling and mixing of vaccines). In the upstream process, the basic principle is to multiply the relevant virus in growth media using specific equipment. For the problematic vaccines in this

[2] Article 2(3) of the Merger Regulation.

[3] See e.g. Guidelines on horizontal mergers, paragraphs 37-38.

[4] See e.g. Guidelines on horizontal mergers, paragraph 28.

[5] The remedy proposal also included the transfer of the production processes and technologies used for Merial's multispecies injectable NSAIDs and oral NSAIDs for horses.

case, bioreactors (stainless steel tanks) were used to produce the relevant antigen.

As for downstream production, there is a mixing process for live and inactivated vaccines, which differs only in the additives used. Once the mixing is completed the liquids are filled into bottles or vials which are then labelled and packaged.

In view of the complexity of the vaccine manufacturing process, it is not common to outsource production to a third party manufacturer. This option is, however, generally open for pharmaceuticals with non-complex galenic forms, for which an established pharmaceuticals manufacturer may generally not need to invest in additional production capacities in the receiving site.

Some of the challenges raised by antigen technology transfers

For an antigen technology transfer to be successful, the equipment in the receiving site must be developed in compliance with strict regulatory specifications. Once this has been verified, some stability batches must be produced for testing, in order to show whether the original process has been successfully reproduced. This is particularly challenging, even when the equipment used is identical to that of the sending site. This is because the behaviour of biologicals, which are living organisms, is highly dependent on their environment. A small change like slightly different water content going through the equipment may change the way they grow, for example. So it is important to reproduce as closely as possible the original environment into the receiving site. Many risk-mitigating mechanisms have to be put in place.

Specific circumstances of this case

Merial's PCV2, PRRS and BVD vaccines represented only a small part of the output of the biological site where they were produced. As a consequence, in addition to proportionality considerations, it was unlikely that a purchaser would have been able to make use of the site's full capacity, and therefore be willing to purchase it, if it had been proposed as part of a divestment.

The initial feedback from the market test indicated that there was a possibility that the antigen production transfer of the divested vaccines would not be feasible, as the manufacturing processes may not be reproducible in a new manufacturing environment. This would notably depend on the level of stability and robustness of the manufacturing processes.

The Commission analysed this data for the divested vaccines, with the help of independent experts. The results indicated a consistent manufacturing process with minimal rejection of batches for all divested vaccines. As a result there were indications that the transfer should be feasible.

Respondents to the market investigation also emphasised that the experience and expertise of the purchaser in bioreactor technology, in particular at the receiving site, were crucial for the success of the production transfer. As for the commercial success of the divested PCV2 vaccine, respondents indicated that it was important for the purchaser to already have a portfolio of complementary swine vaccines.

To ensure the successful transfer of the vaccine production technology, the remedy had to incorporate specific safeguards. In particular, the transfer would be supervised by a technical expert (in addition to the monitoring trustee), and during the interim period the purchaser would be able to monitor the production process and obtain training on it. Also, at the purchaser's option, the transfer would include Merial's key personnel working on the relevant vaccines.

Fix-it-first in Phase 1

This case is among the few where fix-it-first remedies were approved by the Commission in Phase 1. More specifically, in its decision, the Commission assessed the proposed remedy, the suitability of the purchaser, and the compliance of the agreements signed between BI and Ceva with the Commitments.

In general, for remedies to be accepted in Phase 1, the merging parties are encouraged to start remedy discussions with the Commission as early as possible. This is because there is very limited time for the Commission to both conduct the merger investigation and assess the remedy proposal. Also, the competition concern has to be straightforward and the proposed remedy clear-cut[6]. In this case, by the time of the second notification, the competition concerns had already been clearly identified and the remedy discussions were at an advanced stage.

Moreover, this case was a good candidate for a fix-it-first remedy. As stated in the Commission Notice on Remedies[7], the Commission welcomes fix-it-first remedies, in particular where the identity of the purchaser is crucial for the effectiveness of the proposed remedy. This is the case where only very few purchasers can be suitable and where the viability of the remedy would only be ensured by specific assets of the purchaser, or where the purchaser needs to have specific characteristics to ensure that competitive concerns will be solved.

The results of the market test confirmed this situation in this case. To approve the remedy, the Commission therefore had to assess whether the purchaser had the right manufacturing

[6] Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, OJ 2008/C 267/01, paragraph 81.

[7] *Ibid*, paragraphs 56-57.

capabilities (in particular bioreactors), experience and expertise for a timely technology transfer, which significantly limited the pool of potential candidates.

After a careful review of Ceva's plans, assets and expertise, it was concluded that this company fulfilled the strict criteria of a suitable candidate to take over Merial's vaccines business[8]. In addition, Ceva notably had in its portfolio a key complementary swine vaccine to the divested PCV2 vaccine, namely Mycoplasma hyopneumoniae (MHyo), allowing it to market both products together, making commercial success of the divested PCV2 vaccine more likely.

Conclusion

BI/Sanofi Animal Health provides an example of how a complex fix-it-first remedy can be accepted in Phase 1. To ensure the success of a highly complicated antigen production technology transfer, it was crucial for the Commission to ascertain (through expert opinion) that the processes were stable, to vet the purchaser in advance and to install a number of specific safeguards in the remedy. All of this proved feasible in light of the overall timing of this Phase 1 process.

[8] The Commission also concluded that Ceva could take over relevant NSAIDs of Merial.

Competition *merger brief*

Coherent/Rofin-Sinar: Merger between leading CO2 laser suppliers cleared in phase I subject to conditions

Julia Fischer

In October 2016, the Commission cleared the acquisition of laser manufacturer Rofin-Sinar Technologies Inc. (Rofin, USA and Germany) by its competitor Coherent Inc. (Coherent, USA), subject to conditions.

In 2006, Coherent had attempted to acquire its competitor Synrad (formerly Excel). However, the German *Bundeskartellamt* prohibited the acquisition due to competition concerns on the market for sealed-off radio frequency CO2 lasers up to 600W[1]. Ten years later, in 2016, Coherent announced its intention to acquire its competitor Rofin in a USD 942 million transaction. Rofin and Coherent are both major suppliers of lasers with broad product portfolios and global sales and service networks.

The merger between Coherent and Rofin was publicly announced on 16 March 2016 and notified to the Commission on 7 September 2016, following a referral pursuant to Article 4(5) of the Merger Regulation[2]. The Commission declared the transaction compatible with the internal market, subject to conditions, after the initial phase I investigation, on 26 October 2016.

A universe of lasers – defining the relevant product market

Although everybody has an idea of what a common laser looks like, laser types vary largely due to differences in their construction and use. Of particular relevance in this case were the differences in the laser medium that emits the light when excited (for instance gas, solid-state or semi-conductor), the power output and the wavelength of the emitted light.

In line with the decision of the *Bundeskartellamt* of 2006, the Commission concluded in this case that a separate product market can be defined for CO2 lasers[3]. Within CO2 lasers the Commission found that, in line with common business practice in the industry, segmenting between high-power lasers with a power output above 1kW and low-power lasers with a power output below 1kW is appropriate. High-power and low-power lasers differ in their design, end applications and prices. Low-power lasers are primarily used for coding, marking, cutting and welding of organic materials and thin metal, while high-power lasers are primarily used for heavy-duty cutting and welding of thicker metal, for instance in the car production cycle. Furthermore, laser suppliers often specialise in either high-power or low-power lasers.

Moreover, and contrary to the parties' submissions, the Commission found strong indications that the market for low-power CO2 lasers can be further sub-divided at least into lasers with power output below 100W and above 100W respectively. Prices and applications of the different CO2 lasers within the 0 to 1kW range differ widely. In line with these findings, market participants confirmed that it is difficult to substitute lasers below 100W with lasers between 100 and 999W. Also, internal documents of the parties reflect a distinction between lasers with a power output below 100W and lasers between 100 and 999W. However, the definite product market definition within the low-power CO2 laser segment could ultimately be left open by the Commission.

In a nutshell

After the Bundeskartellamt had prohibited Coherent's acquisition of Excel (now Synrad) in 2006, Coherent announced in 2016 its intention to acquire Rofin-Sinar; another leading laser producer.

The Commission found that this merger would have likely raised competition concerns in the market for low-power CO2 lasers, as it would have eliminated Coherent's close competitor Rofin on a market with high barriers to entry and expansion. The acquisition would have left Synrad as the only main competitor alongside few and substantially smaller competitors who do not compete *on par* with the parties and who would not have been able to maintain sufficient competition to avoid price increases and reduced product choice.

The Commission cleared the transaction subject to the divestment of Rofin-Sinar's global CO2 laser business.

[1] BKartA, B 7 – 97/06, Coherent/Excel.

[2] As the transaction was capable of being reviewed under the national competition laws of Germany, Spain and the United Kingdom, the Notifying Parties requested referral of the case to the Commission pursuant to Article 4(5) of the Merger Regulation on 26 May 2016.

[3] This article focuses on the CO2 laser market, as no competition concerns were identified in any of the other markets where Rofin or Coherent were active.

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Competition

Geographic scope of the CO2 laser market

The notifying parties submitted, in line with previous decisions of the Commission and of the German *Bundeskartellamt*[4], that the market for low-power CO2 lasers is worldwide in scope. The market investigation confirmed the parties' claim that most European and North American customers purchase laser sources and systems worldwide – due to the low impact of transport costs on the overall cost – and that producers of laser sources and systems did not differentiate their pricing substantially for customers from different geographic regions.

However, there were indications that the market might not include China, due to import duties and customer preferences that restricted competition from Chinese competitors. Nevertheless, it was not necessary for the Commission's assessment to conclude on the exact geographic delineation of the market, as competition concerns were identified under all plausible market definitions. The Commission therefore left the definition of the relevant geographic market open and took the geographic differentiation between competitors from China and competitors from all remaining countries into account in its competitive assessment.

Effects of the Transaction on the low-power CO2 laser market

The Commission concluded that the transaction was likely to raise competition concerns on the basis of the parties' strong market power and the closeness of competition between them before the transaction, the limited competition from other technologies, the high barriers to entry and expansion, and the feedback from market participants.

Increase in market power

The Commission's phase I investigation showed that the proposed transaction would have combined the largest supplier of low-power CO2 lasers, Coherent, with the third largest competitor on the market, Rofin. With an estimated market share above 50% in the overall low-power CO2 lasers segment (0-999W) and even higher market shares in the sub-segment of CO2 lasers in the power range 100W to 999W, the combined Rofin and Coherent would have been the clear market leader after the transaction.

The Commission concluded that the market power exercised by the parties was in reality even stronger than the market shares submitted by the parties would suggest.

First of all, internal sales of vertically integrated laser source producers were included in the market shares submitted by the parties. Therefore, the sales of such vertically integrated competitors, as well as the market size, would be substantially lower than estimated by the parties if only the merchant market was considered.

Second, the market investigation revealed that Chinese laser source manufacturers do not exert strong competitive pressure on the parties and their European and Northern American competitors, and that they will likely not do so in the future. Customers questioned mainly the quality, technology, development and reliability of laser sources produced by Chinese suppliers. In particular, it was claimed that Chinese suppliers would supply rather low-cost and low-quality products, mainly in the low-end 1-99W power range, while the parties were perceived as high-end and high-price suppliers. Similarly, the parties' main competitors did not regard Chinese suppliers as competitors.

Third, the Commission found that other smaller competitors do not compete *on par* with Coherent and Rofin due to their (i) smaller size, (ii) internal sales focus in case of vertically integrated competitors, (iii) differences in quality, technical features and portfolio, and (iv) lower brand reputation.

Closeness of competition

The Commission's investigation also showed that Rofin and Coherent had been close competitors before the transaction, as their low-power CO2 businesses focussed equally on the 100-999W business. Further, despite some degree of differentiation, the parties' products overlap for their respective top five applications. Also, the parties' internal documents reflected the particular competitive pressure the merging entities exercised on each other. Finally, market participants generally saw the parties as closest or close competitors. The Commission considered, therefore, that before the merger Rofin was a close competitor of Coherent, in particular in the 100-999W segment.

Competition from other laser technologies and non-laser technologies

The parties had claimed that low-power CO2 lasers could be substituted on the one hand by other types of lasers, mainly fibre lasers, and on the other hand by non-laser technologies, such as cutting devices.

However, the Commission's investigation showed that while in the high-power segment, CO2 lasers have been substituted in the past by fibre lasers, for instance for cutting and welding thick materials or metals, the same cannot be said for the low-power CO2 laser segment. For most applications of low-power lasers, the Commission found that fibre lasers could either not be used at all or at least not efficiently or economically, contrary to the parties' submissions.

Regarding non-laser technologies, market participants similarly ruled out the option to substitute low-power CO2 lasers by non-laser technologies due to various disadvantages of non-laser technologies such as lower efficiency, accuracy, replicability, speed and safety, and environmental issues.

[4] BKartA, B 7 – 97/06, Coherent/Excel.

Barriers to Entry and Expansion

The Commission's investigation found that barriers to entry and expansion are high due to (i) the lengthy development process and the need for a broad portfolio, (ii) the importance of economies of scale, (iii) the importance of reputation and field-proven technologies, and (iv) the need for a sufficiently responsive service network.

Although several competitors submitted that they could expand their production of lasers, the Commission concluded that in light of the investment and time required for an expansion that would compensate for the loss of competition between the parties, sufficient entry and expansion to challenge the merged entity's position was unlikely within a sufficiently short period of time.

Customers' reactions

When asked by the Commission, a large proportion of responding customers voiced their concerns about product continuity and the potential reduction of choice after the transaction. As a consequence, customers feared that quality and service might deteriorate and prices might increase for low-power CO2 lasers.

Commission's conclusion on the effects of the transaction

The Commission concluded that the transaction would lead to the elimination of Coherent's close competitor Rofin on a market with high barriers to entry and expansion, leaving Synrad as the only main competitor alongside few, substantially smaller, alternative competitors who do not compete with the parties *on par*.

Therefore, the Commission reasoned that the transaction raised serious doubts as to its compatibility with the internal market with regard to low-power CO2 lasers.

Commitments

To address the Commission's competition concerns, Coherent offered to sell Rofin's Hull (UK) business, constituting Rofin's entire global low-power CO2 laser production. As the Commission had identified a global sales and after-sales network as particularly relevant for the viability and competitiveness of the divestment business, the commitments contained provisions to secure access to existing sales organisation and personnel (also outside Rofin's UK business). In addition, the commitments included an additional criterion for approving the purchaser of the divested business concerning the purchaser's sales and after-sales network.

The divestment removed the overlap between the activities of Coherent and Rofin in the low-power CO2 laser market at the global level entirely and it fully addressed the identified competition concerns.

In addition, to tackle the Commission's concerns regarding the viability and competitiveness of the divested business, the parties improved the final commitments and included further intellectual property rights and technology.

The Commission concluded that the transaction, as modified by the improved commitments, would raise no competition concerns. The Commission's approval is conditional upon full compliance with the commitments.

Conclusion

Ten years after the adoption of the prohibition decision by the *Bundeskartellamt*, the general dynamics of the market for low-power CO2 lasers appeared broadly unchanged. The Commission's investigation showed that the market was still highly concentrated, with Coherent, Rofin and Synrad being the main competitors while smaller competitors, new entrants and Chinese suppliers faced high barriers to entry and expansion, limiting their ability to challenge the "top 3" in the market. Also, fibre lasers and non-laser technologies did not exercise substantial competitive constraints on low-power CO2 laser suppliers. The Commission therefore found that the merger between Coherent and Rofin would likely have led to competition concerns in the low-power CO2 segment similar to the *Bundeskartellamt's* previous finding that the merger between Coherent and Synrad raised competition concerns.

The case highlights in particular how submitted market share estimates need to be assessed carefully on a caseby-case basis for the assessment of true market power, and how other factors have to be taken into account when assessing the market power of the parties prior to a transaction. The case further exemplifies that in cases where R&D, intellectual property rights and a global sales and distribution network are important for the success of a market player, sufficient safeguards ascertaining access to such assets and services have to be considered when designing commitments, to guarantee the viability and competitiveness of the divestment business.