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Roundtable on Conglomerate Effects of Mergers - Background Note

by the Secretariat

10-12 June 2020

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The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

More documentation related to this discussion can be found at:
http://www.oecd.org/daf/competition/conglomerate-effects-of-mergers.htm.

Mr Antonio CAPOBIANCO
[Email: Antonio.CAPOBIANCO@oecd.org]

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Conglomerate effects of mergers

Background note by the Secretariat[*]

Conglomerate effects arise when the products of the merging firms are not in the same product market, nor are they inputs or outputs of one another. Such mergers could enable tying and bundling strategies that foreclose competition, enable price discrimination, or soften competition among firms. These theories of harm have gained new prominence as large digital firms increasingly expand into new markets, leading to specific concerns about digital platform envelopment and the creation of product ecosystems. However, the consideration of potential conglomerate effects should be balanced with the strong potential for efficiencies and the limited empirical evidence of harm. This paper sets out some key indicators of potential harm (especially an absence of effective competition in one market and entry barriers, economies of scale or network effects in the other), as well as the challenges authorities face in terms of evidence gathering, meeting standards of proof and assessing dynamic competition effects. Despite these challenges, authorities may wish to retain an openness to assessing conglomerate effects given their potential impact in some cases, particularly in digital markets, and to seeking behavioural remedies where necessary. Looking ahead, new tests may also be considered to address broad concerns about systemic risk and the accumulation of economic power.

[*] This paper was written by James Mancini and Gaetano Lapenta of the OECD Competition Division, with comments from Antonio Capobianco, Matteo Giangaspero, Chris Pike and Cristina Volpin.

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1. Introduction

1. In the 1960s and 1970s, a wave of transactions raised questions about the conglomerate effects of mergers. These effects arise when a merger has an impact on competition, but the products affected are not in the same product market, nor are they inputs or outputs of one another. In 1967, the US Federal Trade Commission successfully blocked a merger with an explicit focus on conglomerate effects for the first time (Goldberg, 1973[1]).

2. Subsequently, a wave of economic literature was developed to try to identify situations in which a merger between firms that were not competing, nor were in a vertical supply relationship, could harm competition. The potential merger harms included: enabling foreclosure via bundling or tying; concentrating negotiating power by strengthening a product portfolio; facilitating collusive agreements; and generating such strong economies of scale that all competitors would exit (Neven, 2005[2]). The Chicago school theorists assessed the risk of consumer (as opposed to competitor) harm in these situations, finding that harm was unlikely, and that the efficiencies from these mergers could be substantial. In 2001, the OECD held a roundtable, which echoed this prevailing view. Since that time, several new contributions have uncovered situations in which conglomerate mergers could generate harm – almost always when the post-merger firm will have the incentive and ability to foreclose competitors with tying or bundling strategies. The harm from these strategies arises only in particular circumstances, most importantly a lack of effective competition in at least one market.

3. Conglomerate theories of harm have recently been thrust under the spotlight once again. The industrial product conglomerates of the 1960s and 1970s have now been replaced by digital firms operating multi-sided platforms. New theories suggest that digital markets may be especially prone to manifesting harm from conglomerate bundling and tying. They have been developed in an environment of increasing concern about industrial concentration and corporate power, which has resulted in pressure on competition policy - even if its tools may not be the most appropriate remedy. The economic consequences of the COVID-19 pandemic may also lead to a new wave of mergers as various industries undergo structural transformation, and governments consider industrial policy tools to promote economic growth. For instance, failing firms may be acquired by better-capitalised firms in related markets, perhaps encouraged by government incentives aimed at protecting employment.

4. This paper will highlight the new theories, and where they fit within traditional theories of conglomerate harm. It will also highlight the practical challenges that competition authorities face in assessing them. In sum, it appears that the circumstances where harmful conglomerate effects emerge are limited. Further, obtaining sufficient evidence to investigate them, and meeting the requisite standards of proof, can be challenging, particularly given the burden it may place on both authorities and merging parties. At least in part due to these challenges, jurisdictions have shown a differing willingness to investigate conglomerate merger effects. However, it appears that there are specific situations in which the potential for harm warrants investigation, especially in digital markets. Further, merger control accompanied by behavioural remedies could be the right tool to address significant risks without compromising the substantial efficiencies that may arise. This paper is structured as follows:

- Section 2 defines conglomerate mergers and sets out the reasons why firms engage in them.

- Section 3 summarises the empirical evidence of conglomerate effects, which is very limited, although research focusing on digital platforms is ongoing.
- Section 4 lays out the classical theories of harm associated with tying and bundling, in particular with respect to foreclosure, enabling price discrimination, and softening price competition.
- Section 5 describes how these theories have been adapted to digital markets.
- Section 6 highlights some of the key efficiencies stemming from conglomerate mergers.
- Section 7 describes the practical challenges faced by authorities when reviewing conglomerate mergers, namely obtaining the right evidence, meeting standards of proof, assessing uncertain dynamic effects, considering the trade-off with ex-post enforcement action, and evaluating remedies.
- Section 8 concludes.

2. What are conglomerate mergers and why do firms undertake them?

5. Mergers can be categorised as horizontal, vertical or conglomerate. Horizontal mergers bring together firms that are current or future competitors in a product market, meaning they produce (or will produce) relatively close substitutes. Vertical mergers bring together firms at different stages of the production chain, for example a manufacturing firm and one of its suppliers. Conglomerate mergers involve firms that are not product market competitors, and which are not in a supply relationship. The products of the firms can either be:

- **Complements,** meaning that they can, or in some cases must, be used together. In other words, firms will obtain more value from consuming the products together than individually (for example, toothpaste and a toothbrush).
- **Weak substitutes,** also called "neighbouring goods" (Neven, 2005, p. 5[2]), meaning that they can have similar characteristics or uses but are not sufficiently substitutable to be considered in the same product market for antitrust purposes (for example, a compact car and a multi-passenger van).
- **Unrelated products,** meaning that the products are neither substitutes nor complements for consumers. However, the products may involve similar production inputs, or be offered as part of a brand's family of products (for example, engines for airplanes and engines for motorboats).

6. While the term "conglomerate mergers" is often used, many of the mergers reviewed by competition authorities for conglomerate effects do not fall neatly into a single category. In practice, these transactions may involve a combination of horizontal, vertical and conglomerate elements. Thus, the term conglomerate merger will be used here to refer to mergers that are either purely conglomerate (i.e. no horizontal or vertical linkages), as well as to the conglomerate component of more complex mergers.

7. There is a wide range of reasons for firms to undertake conglomerate mergers, some but not all stemming from recognisable economic efficiencies. In particular, conglomerate mergers can give rise to substantial economies of scale and scope, allowing firms to share distribution networks, production processes, common components, skills,

knowledge, intellectual property and even efficient management. For instance, mergers of firms producing complements can facilitate joint marketing, branding or pricing strategies, and incentivise investments in developing systems of products. Mergers involving weak substitutes can allow firms to develop a strategy for differentiating the products and specialising on different groups of consumers. Mergers involving products that are unrelated from the perspective of consumers can generate economies of scope by combining different production processes or sharing certain inputs.

8. Beyond these efficiencies, Bourreau and de Streel (2019, pp. 6-7[3]) identify four key theories for engaging in conglomerate mergers:

- **Resources theory,** according to which firms undertake conglomerate mergers because they have extra resources that cannot easily be sold off. Some examples of this could include internal know-how, indivisible assets and personal data that cannot be sold due to privacy legislation.
- **Internal capital market theory,** which suggests that conglomerate mergers are a way of utilising a firm's excess cash without lending it externally. The authors note that in markets that evolve quickly, using internal sources of funding can make a firm more nimble, competitive, and able to shift between successes and failures. Further, digital conglomerates may have better internal information about market opportunities.
- **Market power theory,** in which case conglomerate mergers are used as a mechanism to promote either unilateral effects, through foreclosure, or co-ordinated effects, as described further below.
- **Agency theory**, which suggests that managers may pursue conglomerate mergers out of self-interest rather than with shareholder profitability in mind. This theory suggests that firm managers may in some cases be motivated by "empire building" rather than a focus on profitability.

9. Conglomerate mergers can also be motivated for reasons unrelated to economic efficiency. For example, they can help firms reduce their taxes, obtain public subsidies, and diversify risk, although evidence of the latter in terms of contributing to firm value is limited (Mueller, 1977[4]). Conglomerate mergers can also be a mechanism for linking firm activities in different geographic markets (King and Fuse Brown, 2018[5]). Cheng (2017[6]) further suggests that conglomerate mergers may be particularly attractive in small or developing economies due to challenges with obtaining scale and overcoming institutional risks including uncertainty in dealing with counterparties when negotiating contracts.

10. The term conglomerate mergers thus applies to transactions affecting a wide range of product relationships, pursued for a wide range of business reasons. However, the situations in which they give rise to potential competition problems, and thus warrant competition authority attention, will arise only in certain limited circumstances.[1] These competition problems, broadly referred to in this paper as **conglomerate effects**, include:

[1] It should be noted that, while they are sometimes discussed in the context of conglomerate mergers, mergers that give rise to monopsony power (buyer power) are more appropriately considered under a horizontal merger framework, since the competition effects occur with respect to a single (input) product market.

- **Unilateral effects**, specifically the risk that the post-merger firm will be able to foreclose competition by using tying or bundling strategies;
- **Co-ordinated effects,** specifically that the merger will facilitate collusive outcomes; and
- **Efficiencies** that are only likely to materialise through the merger.

11. The following sections will review the empirical evidence of these effects, and the theories behind them, as well as the practical challenges associated with their assessment.

3. Empirical evidence of conglomerate effects

12. To provide context to the discussion of conglomerate effects and their potential for competitive harm as well as efficiencies, this section will summarise the relatively limited empirical studies available. In sum, the Secretariat has not found any empirical studies that conclusively demonstrate consumer harm from conglomerate mergers. This may be due to the difficulty in identifying conglomerate mergers, which, as noted above, are pursued in a wide variety of contexts. One study does suggest that further consideration of conglomerate effects in platform markets may be worthwhile, given potential impacts on innovation incentives – see the discussion of Wen and Zhu (2019[7]) below. Further studies that investigate the theories of harm described in Section 4 below would therefore be of significant value for competition authorities in assessing whether to review and prioritise conglomerate mergers.

13. The first set of studies of conglomerate mergers focused on the so-called "third merger wave" in the United States in the 1960s and 1970s. Goldberg (1973[1]) found that the wave had no impact on industry concentration. While industry-level concentration is not generally considered a determinative measurement of competitive pressures on the market level – see, for instance, OECD (2018[8]) – it is notable that conglomerate mergers affecting multiple markets in the same industry do not appear to have affected industry structure.

14. In a survey of studies on the merger wave, Mueller (1977[4]) found no evidence that conglomerate mergers increased **profitability, stock returns or risk diversification** (i.e. that firms engaging in conglomerate mergers did not exhibit better performance than their peers that did not). Thus, in addition to finding no significant impact on competition, it was not clear that conglomerate mergers achieved any significant benefits either. Lande and Vaheesan (2019[9]) go further, highlighting evidence that suggests management quality deteriorated as conglomerates expanded, and note that several conglomerate mergers were undone in the 1980s.

15. Several more recent studies have been released which focus on the impact of specific mergers, and which may be informative for competition policymakers. One study assesses whether **foreclosure and leveraging** (using market power in one market to establish market power in another) occurs with respect to weak substitute products (Chung and Jeon, 2014[10]). The study, described in Box 1 below, found that there was indeed a leveraging effect from a merger of firms producing related products, but that this leveraging only had the effect of enabling entry into markets previously dominated by a single firm. This result suggests that market power can be leveraged across other markets, although the positive impact on competition may be more particular to the particular conditions of the markets studied.

Box 1. Chung and Jeon's study of a merger in Korean alcohol markets

Chung and Jeon conduct an empirical study of the effects of a merger between a large Korean beer company (the market for beer in Korea being a duopoly) and a soju producer. This merger provided a good opportunity to assess leveraging effects given that the usual types of efficiencies were limited – no significant economies of scale were expected given the differences in production processes of the beverages, and the law prohibits the manufacturers from distributing the beverages themselves (thus limiting efficiencies in distribution). Soju markets in Korea were dominated on a regional level by a single producer – an artefact of past government policy that granted soju production monopolies. The beer company's position also varied on a regional basis.

In their study, Chung and Jeon tested for whether the merger generated efficiencies, foreclosure effects, and leveraging effects. They found that the post-merger firm was able to secure a higher soju market share in regions where it had a strong position in the beer markets, likely by leveraging the beer position to increase soju sales in negotiations with distributors. However, the authors found that the leveraging effect was only sufficient to generate an initial position in the market, and did not lead to the foreclosure of rival soju producers. In particular, the authors found that the merger had no effect on the post-merger firm's market share for soju in markets where it was already dominant.

Source: (Chung and Jeon, 2014[10])

16. Another study of the Brazilian education sector compared the impact of horizontal school mergers (i.e. mergers between schools for the same age groups) with conglomerate mergers (i.e. mergers between schools for different age groups) (Policarpo Garcia and de Azevedo, 2019[11]). Specifically, the authors found that conglomerate mergers increased quality and output which, although prices also increased, suggests that consumers derived benefits from the merger's **economies of scale and scope**. By contrast, horizontal mergers involving schools at the same level increased only prices.

17. Finally, a recent study of mobile applications markets could suggest that further consideration should be given to the digital platform theories of harm discussed in Section 5. Specifically, Wen and Zhu (2019[7]) find that the mere threat of entry by a dominant platform owner into an application market is sufficient to cause the incumbent application providers to reduce innovation efforts and price competition – specifically by raising prices. While the study focuses not on mergers but rather the threat of entry (estimated based on whether a competing platform owner has entered the market in their application ecosystem), and it may have linkages to vertical as well as conglomerate theories of harm, it shows how incumbent firms anticipate the threat of entry, which could be facilitated by a merger. Further study of the actual effects of entry, the linkage to conglomerate theories of harm (such as foreclosure through bundling and tying), and the potential efficiencies for consumers, could therefore be valuable.

4. Conglomerate theories of harm

18. New theories of harm have led to increased interest in conglomerate effects of mergers. However, they are rooted in well-established economic theory. This section will describe the traditional conglomerate theories of harm, both in terms of unilateral and co-

ordinated effects. Across these theories, there are two consistent elements: the prominent role of tying and bundling, and the importance of market power (or indeed the absence of effective competition in at least one market). In fact, there is little economic evidence,[2] theoretical or otherwise, to substantiate harm if a conglomerate merger does not contribute to **the ability and incentive** of the post-merger firm **with market power** to engage in **bundling and tying** (defined in Box 2 below), whether for the purposes of foreclosure, price discrimination, relieving innovation pressure, or softening competition. This section will conclude by summarising some broader policy concerns associated with conglomerate mergers that may not be easily addressed within a merger review setting, and which are not the focus of extensive economic evidence.

Box 2. Tying and bundling

Tying occurs when a firm requires its customers to purchase one or more "tied" products if they wish to purchase a "tying" product. This can be accomplished through **technical tying** – for example limiting the compatibility of a competitor's products, or through **contractual tying**, which obligates customers to purchase the products together. **Full line forcing** is a term used to describe a situation in which a consumer who desires one product (the product for which the firm has a dominant position) is compelled to purchase a full set of products.

Bundling occurs when a firm offers multiple products together as a single package. It can do so either through **pure bundling**, which means that the products are only available for sale together, or **mixed bundling**, which means that the products can be purchased separately but are available together, generally at a discount. **Incomplete mixed bundling** refers to situations in which a firm offers some but not all of the products for sale separately, i.e. in addition to the bundle. This could have the same impact as pure bundling if one of the products not sold separately is the monopoly product.

Bundling and tying are often considered together for practical reasons, and in fact bundling can be considered a specific form of tying in which the products are offered in fixed proportions of one another (OECD, 2001, p. 133[12]). However, for the purposes of economic analysis, they are distinct. As Church (2008, pp. 1519-1520[13]) notes:

> *…tying differs from bundling because a tie is more likely to involve divisibility. For instance, a tie requiring two units of product 2 be purchased for every unit of product 1 is not the same as offering to sell a package consisting of four units of product 2 and two units of product 1.*

4.1. Unilateral effects

4.1.1. Foreclosure of competition through bundling and tying

19. Foreclosure is the focus of traditional conglomerate theories of harm. The basic intuition is that a firm with a dominant position in one market can merge with a firm in a more competitive market, and then use its dominant position to foreclose competition in the competitive market. The post-merger firm can do this by selling the product for which

[2] With the exception of the co-ordinated effect, described below, which arises due to the increased symmetry of firms.

it has a dominant market position on the condition that consumers also purchase the product that is offered in the more competitive market.

20. In practice, this foreclosure effect can be achieved by tying or bundling the sale of products. For example, a firm could foreclose competitors (even those that are more efficient) by bundling the sale of a product with a complement that is required for its use. This could eliminate the value of a competitors' standalone product to consumers, and cause it to exit the market.

21. Assessing theories of harm associated with bundling and tying in a merger review is complicated by the fact that the conduct has not yet occurred, and there is uncertainty as to whether it will in fact occur. The likelihood for a conglomerate merger to give rise to foreclosure through bundling and tying can be assessed by considering (i) the ability of the merging firms to implement tying or bundling, (ii) the incentive of the firms to engage in tying or bundling, and (iii) the effects of this conduct (similar to the approach for assessing the risk of foreclose with respect to vertical mergers, as discussed in (OECD, 2019[14])). Two key characteristics will, in particular, shape this assessment:

- **The relationship between the products:** The most intuitively simple form of bundling and tying arises when the products in question are complements – in other words, consuming them together increases the benefit consumers obtain from each product. Indeed, much of the conglomerate literature focuses on cases involving complements (see, for example, (OECD, 2001[12])). A complement can either be consumable, meaning it must be purchased repeatedly (e.g. a coffee pod to use in a coffee machine), or durable, meaning it is an infrequent purchase (e.g. a protective case for a mobile telephone). When a consumable product (i.e. one that must be purchased on a recurring basis) is tied to the purchase of a durable complement, the restriction can be referred to as a **dynamic tie.**

  If the products are complements, the impact of tying or bundling will depend on whether the complement product has alternative uses. In fact, tying may not be necessary or profitable if a firm faces no substantial competitive pressures for a product and its complement has no alternative uses – there are no additional sales of the product for a firm to capture, and so the firm may be able to maximise its profits without needing to resort to tying of the complement. If the products are **strict complements**, meaning that they must be consumed together, then they are effectively already tied by consumers (Neven, 2005, p. 23[2]). However, if there are alternative uses, tying or bundling could in some cases be a way of generating additional profits (Church, 2008[13]).

  The picture becomes more complex, and the conditions for economic harm to emerge more narrow, when assessing the potential for bundling or tying of products that are not complements – that is, products that are either unrelated in the eyes of the consumers, or are only weak substitutes (and thus not in the same antitrust market). For example, in a 2006 publication, the Bundeskartellamt indicated that it assesses a merger that could eliminate imperfect substitution between products (not in the same product market) with a traditional unilateral effects framework used in horizontal mergers (Bundeskartellamt, 2006, p. 22[15]). In particular, tying or bundling is only possible if there are overlaps in the consumers for each of the products involved (under some conditions discussed further below).

  Understanding the relationship between the products is also important to ensure the correct framework is applied to the assessment the competitive impacts of the merger. If two (or more) products are combined together into a single final product, and the separate purchase of these products by a final consumer is unlikely, then the merger should be assessed as a vertical, rather than conglomerate, merger. One example of this situation would be the merger between a car manufacturer and the producer of brake lights, which could be assessed for vertical concerns rather than risks from tying or bundling (OECD, 2001, p. 22[12]).

- **The structure of the markets in question:** Conglomerate merger theories of harm all require the existence of a dominant position, or at least significant market power, in at least one market prior to the merger. Take the example of a merger between Firm 1, which produces product A, and Firm 2, which produces product B. Firm 1 holds a dominant position in the market for A, while Firm 2 faces competition for product B. The concern is that if Firms 1 and 2 merge, they will be able to use their position in the market for A, through tying or bundling, to lessen competition in the market(s) for product B. Most economic models of bundling and tying focus on cases in which the dominant firm has a monopoly position, or at least a sufficiently dominant position that it does not face any effective competition. Otherwise, a bundle or tie may not be effective, since the post-merger firm may risk being undercut, if rival firms can offer an unbundled alternative to the tying product (e.g. product A in the example above). In other words, a strong, dominant position may be required for a firm to have the ability to engage in potential anticompetitive conduct.

  The structure of the markets in which the merging firm does not have a dominant position (e.g. product B in the example above) can also shape the likelihood and effect of bundling and tying. The economic literature generally focuses on situations in which these markets exhibit either barriers to entry or strong economies of scale (Church, 2008[13]). In these situations, tying or bundling as an exclusionary strategy could be profitable and feasible. When there is perfect competition in the market, economic theory suggests that there may be little to gain from bundling or tying (as long as the product in question is only used in conjunction with the monopoly power product, and does not have alternative uses).

22. With these key characteristics in mind, an assessment of the ability and incentives for firms to use bundling and tying to foreclose competition can be conducted. If these conditions are met, an assessment should be made as to whether bundling or tying could induce exit or prevent entry by competitors – particularly those who are unable to match the advantages gained by the firm from bundling or tying (OECD, 2001, p. 21[12]). The overall effect of the conduct on consumers must then take into account the potential efficiencies (described in Section 6 below).

Ability to foreclose through bundling or tying

23. The ability of a firm to engage in post-merger bundling or tying depends on the characteristics of the products and markets in question. Even if the post-merger firm has market power for at least one of the products, it may be unable to employ a bundling or tying strategy to foreclose competition. In particular, contractual tying may be difficult to implement, since a firm may not be able to monitor compliance. For example, it may not be feasible for a firm to ensure that only its brand of consumable complements are used by a consumer. Further, if consumers have buyer power and are able to exert some control over the terms of the sale or are able to credibly threaten to cease purchasing the monopoly product, if the tie is enforced, then the credibility of a firm's tying strategy could be

undermined (see an example of buyer power being assessed in a conglomerate merger in Box 3). Bargaining models have been helpful to determine the impact of a merger with conglomerate effects on negotiations with a customer (Garcés and Gaynor, 2019[16]).

Box 3. The relevance of bargaining power in the assessment of potential bundling strategies: the example of *Bayer/Monsanto*

In June 2017, Bayer notified to the EC its intention to acquire Monsanto. Monsanto and Bayer were both active in crop protection, seeds, traits and digital agriculture. Their global strengths however rested in complementary areas. Indeed, Bayer was a leading crop protection player whereas was a Monsanto a leading traits, seeds and digital farming company.

The EC was concerned that the merged entity would bundle Bayer's crop protection products with Monsanto's broad acre crop seeds. The offer of rebates or guarantees for the combined purchase by distributors or growers might have given rise to foreclosure of competitors.

Amongst others, the EC considered that distributors that are large and sophisticated players and are "*the key doorway to growers in many countries*" would oppose such a bundling strategy incentivising the joint purchase of seeds and crop protection products. It found that distributors often act as advisors to the farmers and wish to maintain their ability to provide objective recommendations for the most suitable products in each circumstance. More generally, the market investigation alongside Bayer's internal documents confirmed, "*distributors, retailers and growers are resisting attempts to block their freedom to operate*."

Furthermore, the EC found that the merged entity would still face both actual and potential competition, given that integrated rivals that already supply both broad acre crop seeds and crop protection products could readily match bundled offers and non-integrated rivals would team up to offer similar bundles.

It concluded that "*it is not evident that the parties have sufficient market power in general and specifically over the distributors to engage successfully in bundling strategies*", given that their buying power would allow them to repel bundling strategies attempted at their expense.

Source: European Commission Decision C(2018) 1709, Case M.8084 – Bayer/Monsanto, 21 March 2018.

24. This contrasts with technical ties that are automatic and would require significant investment or effort to undo. These ties, where possible, are more likely to be credible (Church, 2008, p. 1532[13]), meaning they are more likely to cause competitors to leave a market, or to avoid entering the market. For example, an investment by a firm in changes to its production process in order to limit the compatibility of rivals' complements could be more credible than a tying provision in a sales contract.

25. Credibility will also depend on the particular relationship between the firms and their customers. One theory of harm focuses on markets that have limited space for variety, such as television stations, online search platforms, or retailers. One frequently discussed example relates to supermarkets, which have limited shelf space. Manufacturers compete for this shelf space, and generally offer a portfolio of products. They may use their ownership of "must-stock brands", which all supermarkets feel the need to stock in order

to maintain their customer base, to coerce retailers into also stocking less in-demand products through tying. Whether this threat is considered credible by retailers, however, may depend on the share of the "must-stock brands" in overall profits, and on the presence of competing manufacturers with matching product offerings (Neven, 2005, pp. 12-13[2]). Box 4 sets out one example of the assessment of must-stock brands.

Box 4. Leveraging must-stock brands for foreclosure purposes: the *Labeyrie Fine Foods and Coopérative Agricole Les Aquaculteurs Landais/Groupe Aqualande* merger

In January 2016, the *Autorité de la Concurrence* (FCA) received notification of the proposed joint acquisition of Aqualande by Labeyrie and Les Aquaculteurs Landais. Labeyrie was active in the supply of several food products, in particular fish such as smoked salmon and trout. Aqualande was active in farming of trout and other fish as well as their transformation before sales.

The FCA considered that the markets for smoked salmon and smoked trout are closely related. Labeyrie held a strong position in the market for smoked salmon, also in light of its reputation that made its products a must-stock brand to allow supermarkets to maintain their customer base. It highlighted indeed that the fact that one firm holds one or several brands with a strong reputation in the same market or in neighbouring markets may confer upon it a competitive advantage. Given this factor and considering that sales for both products are usually negotiated with retailers within the same contract, the FCA concluded that there was a credible risk that the merged entity would leverage its strong position on the smoked salmon market to favour its sales of smoked trout to the same pool of customers. This would lead to potential foreclosure of the few existing competitors in the national market, thus reducing product differentiation to the detriment of consumers.

To address these conglomerate concerns, the merging parties committed to keep contractual negotiations for the two products separate, thus avoiding the risk of bundling and subsequent foreclosure.

Source: Autorité de la Concurrence, Decision No. 16-DCC-55 – Labeyrie Fine Foods and Coopérative Agricole Les Aquaculteurs Landais/Groupe Aqualande, 22 April 2016.

Incentives to foreclose through bundling or tying

26. A subsequent step in assessing whether there is a risk of post-merger anticompetitive effects associated with bundling or tying is to determine whether it would be profitable for the post-merger firm to follow this strategy – in other words, whether there would be an incentive to bundle and tie.

27. Economists associated with the Chicago school have suggested that there is little incentive for a firm with a monopoly in one market to engage in tying or bundling to foreclose competition (i.e. to abuse its dominant position) – see, for instance, Church (2008[13]). This stems from the concept of a single monopoly profit: if a firm is already earning a monopoly level of profits in one market, it will not have an incentive to raise prices in the market for the complements to that product, since that could harm demand for the monopoly product and therefore reduce profits – see, for instance, Neven (2005, pp. 22-23[2]). The concept also applied to tying of substitutes or unrelated products, since a monopolist would not want to lose sales from consumers who would have purchased either product independently, but would not be willing to purchase them together. In particular,

the firm would not want to reduce demand for the monopoly product, as the prices and quantities before tying already maximise its profits. As a result, significant scepticism about conglomerate merger theories of harm emerged (OECD, 2001[12]). Box 5 sets out an example where a potential foreclosure harm was investigated, and the conclusion of the investigation was that there was no incentive to engage in such a strategy.

Box 5. Incentives to engage in tying practices: the example of *Essilor/Luxottica*

In August 2017, the EC received a notification of a proposed merger between Essilor and Luxottica.

With regards to the assessment of potential conglomerate non-coordinated effects, the EC was concerned that the merging parties would leverage one firm's strong products to foreclose competitors in the complementary product market of the other firm.

In particular, the EC assessed whether Luxottica could leverage its position in frames and sunglasses to foreclose competitors in lenses, taking into account that they already sold those products to the same customer base.

The EC found that the merged entity would not have the ability or incentive to leverage its position in frames or sunglasses by linking sales of those products to those of lenses so as to foreclose competing lenses suppliers.

For the merged entity to have an incentive to engage in tying practices to induce opticians to purchase more Essilor lenses, the EC noted that the likely loss in the sales of frames and sunglasses would need to be outweighed by the likely gains from the sales of lenses. However, the market investigation showed that opticians valued their independence and sought to preserve their role in the choice of lenses by customers. If the tied offer affected their ability to "mix and match" lenses and frames, thus reducing their ability to meet consumers' tastes and needs, many of them would simply switch away from Luxottica frames. Furthermore, given that the variable cost margins are much higher for frames and sunglasses than for lenses, the merged entity would need to sell a significant number of additional pairs of lenses to compensate for the loss of a pair of frames or sunglasses. In other words, any refusal of the tied offer by an optician, resulting in a loss of revenue, would require the post-merger firm to sell even more lenses per pair of frames or sunglasses to other opticians that would accept it. This would however be unlikely, given that a significant number of opticians would seek alternative suppliers.

Given that the loss of revenues resulting from an optician's refusal to purchase the tied offer would not be compensated by a sufficient increase in the sales of lenses, the EC concluded that the merged entity lacked the incentives to engage in tying practices by leveraging Luxottica's strong position in frames and sunglasses.

Source: European Commission decision C(2018) 1198, Case M.8394 - Essilor/Luxottica, 1 March 2018

28. Much of the economics literature on the subject of tying, bundling and conglomerate mergers since the Chicago school analysis has sought to identify circumstances in which the single monopoly profit critique does not apply. In his seminal paper, Whinston (1990[17]) finds that foreclosure strategies can be profitable contrary to the Chicago school prediction, if models incorporate strategic behaviour, product differentiation and scale economies. The scenarios in which bundling and tying could be profitable through the foreclosure of competition include:

- **Bundling with complements in markets that are not perfectly competitive:** A firm with a monopoly in one product market (the "monopoly product") may find bundling with another product (the "non-monopoly product") profitable in some circumstances. If the market for the non-monopoly product is perfectly competitive, the firm may not generate any additional profits by bundling this product with the monopoly product. However, if there is imperfect competition for the non-monopoly product, for example due to differentiated products, then bundling can be an effective strategy to increase market share and raise prices, with negative consequences for consumer welfare. Martin (1999[18]) finds that this effect can arise regardless of whether the monopoly and non-monopoly products are complements or unrelated. Other models find that price increases and lower consumer welfare are more likely when the non-monopoly products of the firm and its competitors exhibit moderate differentiation (Neven, 2005, pp. 26-27[2]).[3] Further, some models find that bundling is profitable in this scenario, and consumer harm possible, even if there is no exit of competitors from the market (Neven, 2005, p. 26[2])
- **Tying unrelated or substitute products in markets that are not perfectly competitive:** A firm could, in some cases, profitably tie the purchase of a monopoly product to an unrelated product or weak substitute, if the market for the latter product is not perfectly competitive. In particular, the firm could sacrifice some monopoly profits (since tying will reduce demand for the monopoly product), in order to offer low prices for the tied product – effectively subsidising the tied product. This could cause competitors to exit the market and discourage others from entering. The strategy would only be feasible, if there are entry barriers that would prevent competitors from contesting the tied product market in response to price increases. Church (2008, p. 1525[13]) suggests that firms will only use this strategy if the tied product market only has two firms, the tied product exhibits economies of scale in production, the tie is credible (i.e. it will not be reversed after the exit of competitors), it will induce the second firm to exit, and it will increase overall profits after the competitors exit.
- **Tying complements that have additional uses:** Tying could be profitable if there is a complement that does not require the monopoly product to be used. The single monopoly profit theory would not apply in this circumstance because there may be additional profitability to be extracted that is unrelated to the profits from the monopoly product. In that case, the firm may wish to use tying to capture sales of the complement that are unrelated to the monopoly product. If a firm could not survive by catering to the consumers that desire the product for unrelated uses only, then the monopolist could use tying to foreclose its competitors (by preventing any sales of the product where it is used as a complement to the monopoly product). After exit of the competitors, the firm would then generate sales from the complement for uses unrelated to the monopoly product. However, the profitability of this strategy depends on whether these additional sales are sufficient to compensate for any losses in sales of the monopoly product stemming from the tying strategy, in particular if customers stop buying the monopoly product because

[3] In particular, the non-monopoly products cannot be so differentiated that consumers will unlikely to purchase they bundle because they prefer other non-monopoly goods (even if they wish to purchase the monopoly good). At the same time, too little differentiation means that there may be less profitability in this strategy, consistent with the single monopoly profits critique.

they would have preferred another complement product (Church, 2008, pp. 1529-1530[13]).

This situation may in particular arise when several complement products combine to form a system. Church (2008, p. 1541[13]) notes, for example, that a merger between computer software and hardware firms could create incentives for the post-merger firm to foreclose competitors by implementing a technical tie that limits software compatibility for rival hardware systems. Since consumers value variety in software selection, this could reduce the value to consumers of the rival hardware and, unless the rivals develop a strategic response, could lead to the exit of competitors. Theories regarding digital product ecosystems share these concerns and go further, as described below.

- **Tying in the presence of competitive pressures in the origin market:** While the empirical models of foreclosure through bundling and tying often focus on firms with monopoly power in a market, sometimes called the "origin" market, an oligopolistic market structure may also create incentives to bundle and tie. For instance, if there are alternative products that are imperfect substitutes for the origin product, the firm will not have complete monopoly power, and it may therefore have opportunities to increase profits through tying or bundling complements (Whinston, 1990[17]). In other words, the incentive to engage in foreclosure through bundling and tying would be higher if the firm is unable to extract all of the surplus from a monopoly position in the origin market. The effect would be particularly strong if the origin product and its complement were strict complements (Neven, 2005, p. 38[2]) – which contrasts with the case of a monopoly in the origin market, in which cases strict complementarity would mitigate the need for tying or bundling.
- **Tying to capture future sales of complements:** As noted above, there is in theory no profit in tying a monopoly product with a strict complement, since the monopolist can extract all of surplus in a market in the price for the monopoly product. However, Carlton and Waldman (2005[19]) identify a case when this logic breaks down – a monopolist can in fact profitably tie a product to a strict complement when the monopoly product is durable and the complement is upgraded periodically – meaning there are future sales and profitability to capture. The authors use the example of a computer operating system and software that must be run on the system: tying can be profitable for the operating system producer if it means capturing future upgrade sales of the software.
- **Bundling or tying to deny rivals network effects:** For products where network effects are important – that is, where users benefit from the use by others of the same product – bundling and tying can be a particularly effective and beneficial strategy (Kühn, Stillman and Caffarra, 2005[20]). In particular, without the ability to harness network effects from users that consume a bundled product instead, competitors in the tied product market may be unable to attain a critical mass and provide a product with a viable level of quality. If consumers are unlikely or unable to multi-home (use multiple products at once) in this context, the foreclosure effect could be particularly strong. However, multi-homing on its own may not be sufficient to render foreclosure strategies based on denying network effects unprofitable (Bourreau and de Streel, 2019, p. 16[3]).

29. The scenarios listed above all reflect efforts using economic theory to demonstrate where bundling and tying to foreclose competition can be profitable. In practice, proving

these long-established theories of harm has been challenging for competition authorities. As discussed further in Section 7, competition authorities have been hard-pressed to collect sufficient evidence to demonstrate the likelihood of foreclosure, based on the practical ability and incentive of firms to tie and bundle.

4.1.2. Price discrimination through bundling and tying

30. Bundling and tying following a merger can also be used to increase profitability by setting prices closer to different consumers' willingness to pay – in other words, to implement price discrimination. This strategy is useful in markets where consumers assign differing values to a product. In general, price discrimination can have positive or ambiguous effects on consumers and total welfare – see, for instance, OECD (2018[21]). Thus, just because a merger enables price discrimination through bundling or tying does not mean it should be presumed to have a harmful effect on consumers (OECD, 2001[12]). However, as discussed below, some theories suggest that price discrimination via bundling or tying following a merger may be profitable for firms and reduce consumer welfare (even if it contributes to an increase in producer welfare that exceeds this loss, meaning that it is positive for total welfare). As with foreclosure, these theories focus on cases where the post-merger firm has market power in at least one of the markets.

31. Tying products that are complements can be one way of implementing a price discrimination strategy. For example, dynamic tying can be used to price discriminate between different groups of users. OECD (2001[12]) notes the example of IBM computers tying the purchase of punch cards to their systems, enabling it to charge a price above the competitive level for the cards. In effect, this tie could be efficiency enhancing and positive for overall consumer welfare – consumers that purchased high volumes of punch cards may have paid more, but this may have been used to subsidise the price of computers, potentially allowing more low volume users to purchase the system. In other words, setting a higher price on punch cards allowed IBM to charge different amounts to different groups of consumers, based on their differing demand characteristics. The overall effect of this conduct depends on the specific characteristics of the market.

32. Bundling can also be a price discrimination strategy when the products are not complements. In particular, economic models suggest that bundling can be an effective way for firms to increase prices when consumer valuations of products are negatively correlated. Take for example a market with two products, A and B, and two consumers, X and Y, and that:

- Consumer X is willing to pay 5 for product A and 10 for product B
- Consumer Y is willing to pay 10 for product A and 5 for product B

Without bundling, the firm has two options:

- Sell two units of each product by setting the price for each at 5 (the lowest willingness to pay)
- Sell one unit of each product by setting the price for each at 10 (the highest willingness to pay)

With bundling, the firm can sell both products for a total price of 15, essentially averaging out the consumers' willingness to pay for each product.

33. The overall impact of the bundling on consumers will depend on a range of factors, including the potential for countervailing buyer power and the efficiencies described in

Section 6. Adams and Yellen (1976[22]) demonstrate that variable costs play a key role – if bundling induces consumers to purchase products that they value less than the corresponding marginal cost of production, it is more likely to be negative for consumer welfare.

4.1.3. Lower innovation incentives due to bundling and tying

34. Conglomerate mergers could also give rise to dynamic effects, in the form of a reduction in incentives for firms to innovate and develop new or improved products. These impacts can be as negative for consumer welfare as static price effects, and may aggravate static harm – see, for instance, OECD (2018[23]). In fact, the introduction of dynamic decision-making regarding innovation could, in some circumstances, call into question the Chicago school conclusions about a lack of incentive to engage in bundling and tying (Carlton and Waldman, 2005[24]).

35. Bundling and tying strategies can increase the scale of competition for products that form a system: new entrants will need to produce both products, or rely on entry in the other market, in order to compete (Bourreau and de Streel, 2019[3]). In other words, a firm will face a powerful disincentive to invest in innovation and enter a market if there is no corresponding complement system product with which to match its product.

36. These disincentives can also have the effect of reducing threats to a firm’s dominant position in the tying market. In some markets, entering the market for a tied product that is related to, or a complement to, the tying market can be a precursor to entering the tying market (Neven, 2005[2]). In particular, knowledge and experience in the tied product can be important inputs into the product development process for the tying product. Thus, tying or bundling that forecloses competition could also generate gains for the firm using this strategy by protecting its position in the tying market. This strategy could be particularly attractive to a post-merger firm if it is expecting the tying market to grow, and the competitors do not have a substantially better product in the tied market (Church, 2008, p. 1532[13]). Thus, where there are signs that entry into related markets is sequential, there may be a particular risk of conglomerate effects (Bundeskartellamt, 2006, p. 21[15]).

37. Where innovation is important in the market for a tied product, for example in the reduction of costs, Choi (2004[25]) and Etro (2018[26]) show that tying could also reduce the incentives of a conglomerate’s competitors to invest in innovation. The former also suggests that gains from innovation could increase the incentives of a conglomerate to engage in aggressive price competition through tying.

38. An example of bundling strategies leading to potential harm to innovation is set out in Box 6 below.

Box 6. Reduction of innovation incentives as a consequence of mixed bundling: the case of *Qualcomm/NXP*

On 28 April 2017, Qualcomm notified to the EC its proposed acquisition of NXP. Qualcomm develops and sells semiconductors and system software for voice and data communications, application processing and multimedia. Its baseband chipsets (BCs) enable radio functions and connectivity on smartphones, among other uses. NXP supplies Near Field Communication (NFC) and Secure Element (SE) technology allowing smartphones to communicate with nearby devices, for instance to enable contactless payments. Linked to its NFC technology, NXP also licenses MIFARE to SE and SE OS manufactures, which is used in transit ticketing, fare collection, smartcards, ID badges and similar applications.

The EC found that post-transaction, the merged entity would have the ability and incentive to engage in mixed bundling of its BCs with NXP's NFC and SE products, and offer it at a discount compared to the sum of the prices of those standalone components. Furthermore, there was a risk that it would add MIFARE to its foreclosure strategy and couple the mixed bundling with an increase in MIFARE royalties or even a refusal to license MIFARE. The market investigation showed that this could lead to decreased profitability and lower market shares of competitors, and reduce their ability and incentives to innovate and compete.

First, given that BCs and NFC and SE markets are characterised by intensive R&D activity and substantial upfront investments in product development in order to remain competitive, a decline in market shares and profits may translate in reduced prospects of monetising innovations, thus discouraging competitors to continue investing in developing their products.

Second, before committing to such significant R&D, suppliers need to ensure that their products or bundles respond to at least mandatory technical requirements requested by mobile device OEMs. One of those requirements is MIFARE. If they were not able to comply with this requirement or could do so at higher costs due to the increase in MIFARE royalties, this might reduce their incentives to invest in product development.

Qualcomm's internal documents also pointed to the fact that bundling MIFARE with SE and LTE BCs while increasing MIFARE licensing royalties would limit NFC and SE competitors' competitiveness to Qualcomm's advantage.

Source: European Commission decision C(2018) 167, Case M.8306 - Qualcomm/NXP Semiconductors, 18 January 2018.

4.2. Co-ordinated effects (softening of competition)

39. Another theory of harm associated with conglomerate effects of mergers relates to a softening of competition on price or any other parameter. The concern is that bundling can result in differentiation that gives the merging firm, and potentially its competitors, market power. Bundling according to this theory enables a form of tacit market sharing when consumers have differing preferences.

40. Take the example of a firm that is a monopolist in one market and is merging with a firm that faces one competitor in its market. Bundling could in effect sort consumers between those with a high valuation of the monopoly product, and those with a low valuation. The post-merger firm could raise the price of the bundle above the sum of the monopoly price and the competitive duopoly price. At the same time, the post-merger firm's competitor in the duopoly market would no longer face competition for consumers that are not interested in the monopoly product, meaning it could raise prices as well. A similar segmentation of markets and price increases through bundling could also arise in a variety of other market structures – see, for instance, Church (2008, pp. 1533-1534[13]). Risks of these effects may be particularly pronounced in markets where there is variation among consumers in terms of their preferences, or some degree of market segmentation already in place (Neven, 2005, p. 37[2]).

41. While this theory has not been applied extensively, it was a focus of the Bundeskartellamt's prohibition decision in *Springer/ProSiebenSat.1*, as described below.

Box 7. Bundeskartellamt's *Springer/ProSiebenSat.1* prohibition decision

In January 2006, the Bundeskartellamt prohibited the merger between Springer and ProSiebenSat.1 based on a conglomerate theory of harm.

Springer was one of the largest German publishing companies, with a significant market position in the national reader market for over-the-counter newspapers and in the advertising market for newspapers. ProSiebenSat.1 was a private broadcasting channel holding a collective dominant position with RTL Group in television advertising (a so called "uncompetitive duopoly" with no effective competition from other players).

The Bundeskartellamt found that the transaction would have led to a strengthening of market power in several markets.

First, the authority found that the merger would have led to a further assimilation of the corporate structures of the merged entity and ProSiebenSat.1's competitor RTL Group, thus increasing the risks of parallel behaviour, and would have further strengthened the duopoly in the TV advertising market.

Second, following the implementation of the transaction, Springer would have been able to offer coordinated product advertising campaigns across several media for third parties and this would have further reinforced its paramount position in the advertising market for newspapers.

Finally, post-merger, the cross-promotion in Springer's newspapers would have reinforced ProSiebenSat.1's strong position in television advertising. Similarly, cross-media effects would have reinforced Springer's dominant position in the tabloids market. For instance, ProSiebenSat.1 would have been able to provide special offers or corporate discounts in favour of Springer's Build newspaper, thus further strengthening its dominant position.

Source: Bundeskartellamt decision, Case B6-103/05 - Axel Springer/ProSiebenSat.1, 19 January 2006

42. More generally, conglomerate mergers could give rise to co-ordinated effects concerns to the extent that they increase multi-market contact – in other words, if the post-merger firm will face competitors present in the same set of markets. While the ability to match a competitor's conglomerate structure could enhance competitive pressure, traditional economic theory suggests that it may also increase the incentives of firms to collude – see, for example, Bundeskartellamt (2006, pp. 26-27[15]) and the decision in *Axel Springer/ProSiebenSat.1*. In particular, multi-market contact increases the gains from a collusive agreement and offers more opportunities for punishment in the event of deviation. However, Darmon et al (2019[27]) find that these incentives will not arise in all markets, and in particular that multi-market contact will result in more intense competition in platform markets exhibiting network effects.

4.3. Broader policy concerns

43. Conglomerate mergers can give rise to concerns that do not fit neatly into the competition theories of harm described above. A good example is the debate about industrial concentration, which is on the rise in at least some OECD countries (OECD, 2018[8]). In addition, there are growing concerns about the role of digital conglomerates and the collection of consumer data.

44. Merger review, which remains primarily focused on horizontal effects, cannot tackle all of the issues brought forward within its existing frameworks. Recent efforts to reinvigorate conglomerate effect theories of harm in digital sectors may, however, bring some of these ideas into a competition framework. A greater openness to considering conglomerate effects, and clarifying the situations in which they may be harmful, could partially address at least some concerns. Others may require an advocacy-based approach, although some have called for legislative change.

45. Broad concerns about the concentration of economic power in the hands of large firms have fuelled at least some of the recent discussion about conglomerate mergers. These concerns include the ability of firms to engage in rent-seeking, decisive lobbying and, in at least some jurisdictions, exercise financial influence over the political process. Further, there is also the risk that the increasing size of conglomerate firms may give rise to systemic risk (Joehnk and Nielsen, 1974[28]), particularly in the financial sector, or economic inefficiencies that are not addressed through competitive pressures due to entry barriers (Goldberg, 1973[1]). The specific threshold at which this concentration of economic power becomes a problem, nor has empirical analysis been done to flesh out these concerns, but there is a clear potential for these effects to shape market competition. For example, lobbying can undermine competitive neutrality (i.e. equal treatment by government policy) between firms and distort the competitive process.

46. The influence of conglomerate firms, and the impact of conglomerate mergers, may be particularly strong in smaller economies. Cheng (2017[6]) suggests that conglomerate business models are more common in smaller countries. In particular, entering related markets may be the best means of growth for successful domestic firms (often family-owned) in small economies. Further, where there are institutional challenges in developing economies, such as a lack of contract enforcement, there are significant economies of scope for large firms that have developed the capacity to deal with these strategies and absorb risk. Access to financing, the ability to diversify risk, and the favour of local governments who have selected national champions are also important assets for conglomerates in smaller economies. Cheng notes that these built-in advantages for conglomerate business models can have the consequence of crowding out entrants, limiting capital market development if most business financing occurs within conglomerate structures, and enhancing the capacity for incumbents to engage in predatory pricing. Thus, some of these concerns can be addressed within a competition policy, if not competition enforcement, framework.

47. In addition to these broad concerns, there may also be sector-specific policy concerns that arise with respect to conglomerate mergers. One particular example is in the media sector, where concerns about the diversity of voices and having an informed public in a democracy, arise – see, for example, OECD (2003[29]).

48. In order to address the size of conglomerate firms (which in their view create economic and societal risk), Lande and Vaheesan (2019[9]) make a proposal to significantly change merger control by adding a value threshold for transactions; specifically, blocking all mergers in which both firms have assets over USD 10 billion, regardless of horizontal overlaps. This may have a particular impact on conglomerate mergers not traditionally addressed within current antitrust frameworks. Based on past transactions, this would, according to the authors, result in the prohibition of 15-25 mergers a year in the US.

49. Some more modest and flexible policy solutions may be available as well. In particular, measures could be targeted to a specific set of potential conglomerate merger risks that could have a direct effect on market competition, including:

50. The post-merger firm becoming a source of **systemic risk** due to its size and the importance of the markets in which it operates. This could lead to the firm benefitting from tailored measures, including implied government support in case of the risk of failure, relative to less systemically important competitors.

51. If one of the pre-merger firms received distortionary **subsidies or other state support,** it could use its position to gain an advantage in the other firm's markets, widening the competition effects of this support. This could be a particular risk with respect to state-owned enterprises where governments do not follow competitive neutrality principles.

52. The merger leads to a concentration of **lobbying** or **public advocacy power.** For example, this could emerge when firms acquire most of the technical expertise needed to design and enforce regulations. While competition authorities have acted in cases where professional associations have used regulatory processes to restrain entry and limit outside competition (see, for example, the case pursued by the US Federal Trade Commission against the North Carolina Board of Dental Examiners), they have not yet considered whether a merger could grant sufficient informal influence to accomplish the same objective.

53. First, these risks could be assessed within existing competition frameworks. Given the new and uncertain nature of these harms, behavioural commitments could be the best tool for addressing these concerns (e.g. transparency and a commitment to competitive neutrality in public policy advocacy by the merging firms).

54. Second, the addition of new tests in merger control associated with certain conglomerate merger risks could be considered, whether their implementation would be left to competition authorities or another regulator (or investment review mechanism). These tests could be narrowly tailored to specific risks for competition beyond the theories of harm described in the previous sections.

55. Third, advocacy by competition authorities and the competition policy community more broadly may be an alternative. This advocacy would focus on reducing opportunities for the economic influence of large conglomerate firms to distort competition. In particular, this could involve critically examining the role of public policy vis-à-vis systemically important firms, and the need to promote competitive neutrality throughout the policy development process.

56. While the precise approach and risks to be addressed are still unclear, there could be a valid competition policy rationale for considering conglomerate mergers in the context of some broader policy concerns. Thus, further reflection and research in this area may be valuable.

5. Applying conglomerate theories of harm to digital platforms

57. The theories of harm regarding foreclosure, price discrimination and softening of competition are well established, as it is evident from the age of much of the economic literature on these topics. However, there has been a resurgence of interest in conglomerate effects in response to the growing importance of digital conglomerate firms, and some recent conglomerate mergers in the digital sector.

58. At the outset, it should be noted that some of the characteristics of digital markets may increase the risks of traditional conglomerate merger theories of harm. In particular:

- **Economies of scale and low marginal costs,** which contribute to the incentives of firms to tie and bundle (OECD, 2001[12]), are prevalent in digital markets. Adding users to a digital platform, for example, involves negligible marginal costs, and so bundling and tying that increases the user base can be particularly attractive.
- **Economies of scope** are a fundamental reason for firms to undertake conglomerate mergers (as discussed further in Section 6 below). Economies of scope can be strengthened with bundling or tying, increasing the incentives to engage in these strategies. In digital markets where assets such as software, consumer relationships, or data can be applied in different markets, economies of scope may be particularly strong, and may even strengthen or protect a firms' position in the monopoly market (Condorelli and Padilla, 2019, pp. 28-29[30]). Further, Bourreau and de Streel (2019, p. 17[3]) indicate that economies of scope could cause firms to engage in product proliferation strategies – entering numerous markets in order to protect their monopoly position in their primary market. This strategy could be used to prevent competitors from establishing a position in complement or related product markets that would allow them to challenge the monopoly market.
- **Network effects** are also particularly important for some digital products, suggesting again that the gains from bundling and tying may be significant, and the foreclosure effects on competitors particularly strong (Kühn, Stillman and Caffarra, 2005[20]).
- **Technical tying,** which as noted above makes a firm's tying or bundling strategy more credible, could also be particularly common in digital markets due to the ability of firms to incorporate ties into their product design (such as limited compatibility or pre-installation). In fact, it may be particularly easy for firms to implement technical ties by limiting the interoperability of competitors' products within a system (or simply to refrain from undertaking the effort or sharing the information necessary for interoperability, which can be distinguished from tying). The degradation of interoperability was a key theme in several recent mergers, including *Microsoft/LinkedIn* (described in Box 8 below) and *Broadcom/Brocade* (described in Box 9), as well as *Intel/McAfee*, and *Qualcomm/NXP*.

Box 8. Interoperability concerns in *Microsoft/LinkedIn*

In October 2016, Microsoft notified to the European Commission (EC) its intention to acquire sole control of LinkedIn. Microsoft is one of the leading suppliers of operating systems (OSs) for personal computers and mobile devices. LinkedIn operates a professional social network (PSN).

The EC's conglomerate concern was that Microsoft would pre-install LinkedIn on all Windows personal computers and combine all user databases, while driving LinkedIn's competitors out of the market by not providing them with the necessary technical information to ensure interoperability with Microsoft's products. In the EC's view, the pre-installation practice would substantially increase the user membership of LinkedIn, while OEMs would have no incentive to install a second PSN application that would be perceived as a superfluous duplication of LinkedIn. For the same reason, users would not spontaneously download a second non-pre-installed application serving the same purpose ("end users' inertia"). Post-merger, the foreclosure effects of rival PSNs would be further strengthened by network effects: more and more users would be attracted and generate content on LinkedIn while fewer users would have an incentive to join rivals' smaller networks, thus leading to market tipping in favour of LinkedIn.

To prevent foreclosure of standalone PSN competitors, Microsoft undertook amongst others:

- To grant rival PSN providers access to Microsoft Office's application programming interface (API), to allow them to compete effectively with LinkedIn, for instance by developing similar functionalities as those that Microsoft was envisaging to introduce in relation to LinkedIn; and
- Not to force PC manufacturers and distributors to pre-install LinkedIn on Windows PCs and to allow users to remove it, should the manufacturer or distributor decide to pre-install it. This commitment generally aimed to ensure an effective choice at both the OEM and the user level as to whether or not to have the LinkedIn application installed.

Source: European Commission Decision C(2016) 8404, Case M.8124 – Microsoft/LinkedIn, 6 December 2016

Box 9. The assessment of *Broadcom/Brocade* merger in the EU and the US

In November 2016, Broadcom announced its intention to acquire sole control of Brocade.

Broadcom produces connectivity chips used in a wide range of products, from mobile devices to servers. Brocade was active in the production of networking switches, software and storage products. The parties' businesses did not present any horizontal overlaps but antitrust agencies were concerned about the complementarity of their products.

In the EU, the EC cleared the transaction subject to commitments.

First, the EC took into account the complementarity of Broadcom's Host Bus Adaptors (FC HBAs) (used in servers or storage devices to connect the server to a switch that determines the device of origin and destination before forwarding the data to such destination) with Brocade's Fibre Channel (FC) Storage Area Network (SAN) switches. The EC was concerned that the merged entity would degrade the interoperability of its own switches with third-party competing FC HBAs (and vice versa), for instance by delaying or failing to transfer the necessary information and equipment about their next generation products to other FC HBA suppliers. This would lead to reduced interoperability of future generation competing FC HBAs with the merged entity's switches.

Second, the EC was concerned about the possible leakage and misuse by the merged entity of confidential information related to competing FC HBAs. FC HBAs suppliers usually provide certain information to switch suppliers to ensure interoperability of their respective products. Post-transaction the merged entity's business unit producing switches could pass on this information to the unit responsible for FC HBAs in order to use it to favour its own FC HBAs to the detriment of competing vendors.

To address these concerns, Broadcom committed to cooperate closely and in a timely manner with competing HBAs suppliers to achieve the same level of interoperability as its own HBAs and to protect third parties' confidential information.

Similarly, the US FTC raised concerns about Broadcom's potential use of Cisco's competitively sensitive confidential information to coordinate action between Brocade and Cisco (the two de facto competitors in the highly concentrated market for FC switches), thus increasing prices for customers purchasing FC switches. The FTC imposed a firewall remedy to address this concern (i.e., separate facilities and a separate information technology system with security protocols that allow access only to authorized individuals), thus avoiding any possible use of such confidential information for any other purpose than designing, manufacturing and selling FC products for Cisco.

Source: European Commission Decision C(2017) 3370, Case M.8314 – Broadcom/Brocade, 12 May 2017; Federal Trade Commission Press Release, "FTC Accepts Proposed Consent Order in Broadcom Limited's $5.9 Billion Acquisition of Brocade Communications Systems, Inc.", 3 July 2017, https://www.ftc.gov/news-events/press-releases/2017/07/ftc-accepts-proposed-consent-order-broadcom-limiteds-59-billion

59. At the same time, more subtle, indirect and non-binding methods of tying may also be possible in digital markets, which nonetheless have similar effects to more classic types of tying. This includes a platform showing preference for related products within the user interface for a product over which it has market power, for example through default settings – also called "self-preferencing" (Condorelli and Padilla, 2019, pp. 19-20[30]). Another risk, given the importance of intellectual property in digital markets, is that of tying through licensing – firms including several patents in a licensing agreement. This suggests that contractual tying may be more feasible in some digital markets.

- **Feedback loops** are also prevalent in digital markets. This refers to self-perpetuating effects that tend to amplify competitive advantages – see, for example, OECD (2016[31]). For instance, attracting users to a platform can result in higher advertising revenues that are reinvested in the platform. When combined with network effects, these investments can further increase the user base, thus continuing the cycle. The existence of feedback loops could mean that both the potential harms and efficiencies associated with conglomerate effects are stronger (Bourreau and de Streel, 2019, p. 17[3]).

- **Essential components** have also been a major subject of debate with respect to digital mergers. In particular, some have indicated that firms with access to an essential input component, such as a set of consumer data or a type of software, may be able to foreclose competition in markets they enter through a conglomerate merger (Bourreau and de Streel, 2019, pp. 18-19[3]). These concerns fit more easily into a vertical merger assessment though, since they relate to controlling access to an input to production (see OECD (2019[14]) for further discussion of these issues).

60. These characteristics suggest that the risks (and efficiencies) associated with traditional conglomerate merger effects – particularly tying and bundling – may be more common in digital markets. Some specific scenarios that build on these elements are introduced in the following sections.

5.1. Envelopment theories of harm

61. The concept of envelopment refers to the ability of a platform with dominance in one market to enter another platform market (whether the platforms are complements, substitutes, or unrelated) by bundling or tying the two platform products. As a result of network effects (from the dominant platform's existing user base) and economies of scope (due to shared technology and data), the competing platforms in the second market would

be unable to compete. Network effects and economies of scope are generally crucial for the success of the strategy – without an overlapping user base (or potential user base), or at least substantial efficiencies in product development, the bundle or tie is not likely to be profitable (Bourreau and de Streel, 2019, p. 16[3]).

62. As noted in OECD (2001, p. 20[12]), one of the key conditions for a conglomerate merger to give rise to competition harm is that competitors will be completely unable to match the extent of efficiencies delivered by bundling and tying. While these efficiencies can generate substantial benefits for consumers, there is a risk that in exceptional circumstances, they are so strong as to relieve firms from dynamic competitive pressure, and thus lead to a worsening of consumer welfare (e.g. through worse quality and fewer innovation incentives). Platform markets that are susceptible to tipping into monopoly due to network and other conglomerate effects may be more likely to meet these exceptional criteria.

63. In the special case where products are provided to consumers at a price of zero, as is common in many platform markets, dominant platforms may use bundling when it is not possible to lower prices in the market they are entering. In other words, bundling can make strategies to foreclose competition with subsidies from a monopoly market possible, even if the competing firms in the target market are charging a price of zero (Condorelli and Padilla, 2019, p. 19[30]).

64. A particular type of envelopment strategy, called "privacy policy tying", has been set out by Condorelli and Padilla (2019[30]). In particular, it involves a dominant firm obtaining data collection consent from its users in a broad set of circumstances. It then enters another market that features an overlapping user base with its original market (even if the products are unrelated), and uses its data collection consent to obtain data from the overlapping consumers in both markets. The platform sets out to dominate the new market by providing its product for free to all users, in effect subsidised by the origin market, and uses the data that it obtains from the new market to entrench its position in its origin market (assuming the data is sufficiently valuable and rare to do so). This entrenchment could be especially strong if the potential competition in the origin market could have come from the now-dominated new market. Notably, this effect can arise even with respect to products that are unrelated in terms of demand, and which do not feature similar inputs. Privacy policy tying suggests that established theories of dynamic competition harm from conglomerate mergers can fit the unique characteristics and behaviour in at least some digital platform markets.

65. The risks associated with privacy policy tying, and indeed envelopment strategies generally, is that they may create insurmountable **entry barriers** for firms, even if they are more efficient. In particular, firms may be obligated to either enter numerous markets simultaneously, purchase costly data in order to replicate the advantages of conglomerate firms, or develop entirely new business models (Condorelli and Padilla, 2019, p. 45[30]).

5.2. Other digital merger theories of harm

66. Several other digital theories of harm, again building on the classic economic literature, have been identified with respect to conglomerate mergers. They include:

- **Organisation of products into ecosystems:** Through conglomerate mergers, firms can link different product markets within a branded "ecosystem". This can generate synergies for consumers by creating a "one-stop shopping" experience for consumers (Chen and Rey, 2018[32]), as well as a common "look and feel" in the user interface (Condorelli and Padilla, 2019, p. 15[30]). Further, even if there is no link in functionality or technology, products linked across ecosystems benefit from a shared brand and consumer goodwill (Cheng, 2017, p. 44[6]). New additions to a firm's product ecosystem following a merger may even benefit from an increase in perceived quality. Whether directly, through bundling and tying, or indirectly, through branding and facilitating connections within user interfaces, product ecosystems can accomplish something similar: increasing the scope of competition across markets, and increasing differentiation. This may generate entry barriers by requiring firms to simultaneously enter several markets, or lead to co-ordinated effects and the softening of price competition by increasing symmetry and multi-market contact among firms.

- **Acquisitions of potential competitors in related markets:** As previously noted, conglomerate mergers may involve particular risks when they affect markets that exhibit sequential entry. In other words, a merger that enables foreclosure in a target market can protect a monopolist's position in a related market. A conglomerate merger may be an effort to prevent competition from reaching a market in which a firm has a dominant position by eliminating nascent competitors (Bourreau and de Streel, 2019, pp. 21-23[3]). The effects of these mergers, an example of what are sometimes called "killer acquisitions", and the proposed frameworks to assess them are described in OECD (2020[33]). One particular challenge of assessing these mergers is that it may not be clear at the time of the transaction whether the acquisition target is, or will be, a horizontal competitor, or if the transaction would more appropriately be assessed in terms of tying and bundling risks. This may require multiple theories of harm to be assessed in parallel.
- **Enabling parallel exclusionary conduct across multiple markets:** In digital markets, conglomerate mergers can give rise to an additional co-ordinated effect – the potential for parallel exclusionary conduct, for example by facilitating the simultaneous application of resale price maintenance or most-favoured nation clauses by firms across multiple markets (Cheng, 2017, p. 62[6]).

6. Efficiencies associated with conglomerate effects

67. There are numerous theories of harm associated with conglomerate effects of mergers, but their number and complexity is due more to the fact that they apply only in a narrow set of circumstances than to their severity. In fact, the economic literature recognises that the efficiencies associated with conglomerate mergers can be substantial, and the harms very dependent on the specific circumstances of the market. The key challenge for competition authorities remains in distinguishing the theories of harm described above from other conglomerate effects, including tying and bundling, that may be harmful to competitors but broadly beneficial to consumers. This process will also involve weighing static and dynamic effects, as discussed further in Section 7 below. While not exhaustive, this section will introduce the range of efficiencies stemming from conglomerate mergers as identified in the economic literature and past case experience.

68. One commonly cited efficiency of mergers between firms producing complements is what is referred to as the **Cournot effect.** When separate firms produce complementary products, they do not take into account the impact of their decisions on the producers of their product's complements. For instance, if a firm decreased the price of a product, it

would increase the demand for its complement product, benefitting the producers of the complement through what is called a pricing externality. If the firms have market power in their respective markets (meaning that prices are not at a competitive level) and they do not co-ordinate with one another, they may not incorporate this externality in their pricing decisions. This would lead to higher prices and lower output overall. However, if two firms producing complements merged, they could take into account this externality by bundling or at least co-ordinating the prices across products. The resulting Cournot effect could well eliminate competitors, but it would also likely result in lower prices for consumers, higher output and improved efficiency - see, for example, Church (2008[13]) and Neven (2005[2]).

69. The merger-specificity of the Cournot effect was, however, called into question by Spulber (2016[34]), who argued that a merger would not be necessary for pricing to take into account pricing externalities. In particular, the author used a bargaining model to show that monopoly producers of complements would reach the same market outcome as a merged monopolist, concluding that the Cournot effect should not be recognised as an efficiency of conglomerate mergers.

70. A similar type of efficiency, stemming from **the co-ordination of decision-making** across complement producers, relates to overcoming investment holdup and quality control problems (Church, 2008, p. 1524[13]). In particular, separate producers of complements may hesitate in making investments or improving product quality because their individual gains would be insufficient, even if they would be collectively beneficial when considering producers of complements and consumers. Further, investments in compatibility between complements may be avoided if a firm is concerned about becoming dependent on another firm. Thus, a conglomerate merger could improve market efficiency in some cases by enabling investments and innovation (Bundeskartellamt, 2006, p. 19[15]). This effect may be particularly important in digital markets, where investments in compatibility and cross-functionality may deliver benefits to consumers, although one could question whether they can only be achieved through a merger.

71. Conglomerate mergers can also give rise to **efficiencies on the demand side**. Bundling can lower search costs for consumers, provide convenience in the form of one-stop shopping, and in digital markets lead to user friendliness through common interfaces – see, for instance, (Bourreau and de Streel, 2019, pp. 11-12[3]). Further, Cheng (2017[6]) suggests that consumers and contract counterparties rely on conglomerate brand names in developing countries due to low trust in institutions and contract enforceability. An example of the assessment of these types of efficiencies is set out in Box 10 below.

Box 10. Portfolio efficiencies defence in *Procter & Gamble/Gillette*

In May 2005, Procter & Gamble notified to the EC its intention to acquire full control of Gillette.

Procter & Gamble is a company active in the field of household, beauty, baby and family care products, while Gillette manufactures consumer goods, such as blades, razors and batteries.

Besides the horizontal overlaps in the market for battery toothbrushes, the EC assessed whether the transaction would give rise to anticompetitive conglomerate effects, in particular foreclosure of competitors to the detriment of consumers as a result of bundling non-complementary products, rebates and promotions.

The EC explicitly took into account portfolio efficiencies as a defence, i.e. the benefits brought to retailers and customers thanks to the enlarged product portfolio. In particular, it assessed the benefits arising from having a one-stop-shop supplier to negotiate with, as well as the stronger innovation capacities and economies of scale and scope brought by the transaction, such as the ability to offer a full truckload of the same product or products from the same factory.

Following its market investigation, the EC concluded that anticompetitive conglomerate effects were unlikely to occur, as the merged entity would still face competition from suppliers with similar product portfolios and the risk of portfolio effects and exclusion of competitors was mitigated by the ability and incentives of retailers to exercise countervailing buyer power.

Source: European Commission Decision, Case COMP/M.3732 – Procter & Gamble/Gillette, 15 July 2005

72. **Economies of scale and scope**, mentioned above as factors that may raise incentives to engage in foreclosure through bundling and tying, can also produce significant benefits if passed on to consumers. Management skill, internal experience from "learning by doing", and more effective utilisation of assets already in use are some examples – see, for instance, Condorelli and Padilla (2019, p. 14[30]). Significant efficiencies could also be achieved if the products share distribution channels (Church, 2008, p. 1506[13]). Digital markets may exhibit particularly strong economies of scope, since products that are unrelated in terms of demand may require similar inputs (e.g. data, software and modular components). Further, a desire to protect intellectual property and limitations on data sharing could mean that technology firms can more efficiently enter markets with their excess capacity – a version of the "internal capital markets" theory described earlier (Bourreau and de Streel, 2019, pp. 7-10[3]).

73. More broadly, there are circumstances in which the theories of harm described above are reversed. This can apply, for example, where tying and bundling can encourage firm innovation activity by increasing its potential returns (Carlton and Waldman, 2005[24]), and where envelopment strategies may facilitate the entry of new players into markets that unleash aggressive price competition (Condorelli and Padilla, 2019, p. 35[30]). Care in applying these theories of harm is therefore warranted.

7. Practical challenges for authorities when reviewing conglomerate mergers

74. Conglomerate merger effects are a relatively rare focus of competition authority merger reviews. Investigating these theories of harm generally involves a determination of the incentive and ability of the post-merger firm to foreclose or soften competition using certain strategies (e.g. tying or bundling). Once a feasible set of strategies has been identified, there must then be an assessment of their overall effect – i.e., whether consumers will be harmed by, or benefit from, their implementation. The precise analytical approach varies significantly across jurisdictions, although there are some common elements.

75. Table 1 highlights the main elements of selected jurisdictions' merger guidelines that deal with conglomerate mergers. The guidelines generally all emphasise that most conglomerate mergers do not pose competition problems, but could give rise to foreclosure through tying and bundling (often assessed in terms of ability, incentive and effect), co-ordinated effects and in some cases the elimination of potential competitors. One particular exception is the US guidelines, which do not discuss theories of harm specific to conglomerate (as opposed to vertical) mergers.

Table 1. Conglomerate merger elements in the merger guidelines of selected jurisdictions

Jurisdiction	Foreclosure theories of harm	Co-ordinated effects	Other theories of harm	Efficiencies
Australia ([35])	Risk of foreclosure through bundling and tying assessed in terms of: • Ability (market power, must-have products, differentiation, brand loyalty) (p. 26) • Incentives (whether benefits outweigh lost sales, economies of scale) (p. 27) • Effects (proportion of firms to be foreclosed and those to remain, proportion of customers likely to continue purchasing competing products, barriers to entry, whether entry will only be possible if firms provide a full range of products) (p. 28)	Assessed based on usual conditions (ability/incentive to reach agreement, detect deviations, threat of punishment, lack of competitive constraint (pp. 30-31)		Better integration, increased convenience, reduced transaction costs (p. 25)
Canada ([36])	Assessed in terms of whether post-merger firm will have the ability and incentive to "leverage a strong market position from one market to another by tying products together." (p. 37)	May encourage co-ordination through multi-market contact (p. 37)		
EU ([37])	Merger may "confer on the merged entity the ability and incentive to leverage a strong market position from one market to another by means of tying or bundling or other exclusionary practices". Assessed in terms of: • Ability to tie or bundle (requires significant market power, not necessarily dominance, and one product must be important for consumers; common pool of consumers). • Ability of rivals to implement counter strategies (e.g. independent rivals forming competing bundles) • Incentive (greater if there are economies of scale, depends on relative value of different products, since forgoing sales in one market would only make sense if the other offered substantial gains – can be assessed based on past behavior) • Effect (potential entry deterrence/barriers to entry, countervailing buyer power)	Could make tacit co-ordination more likely, particularly if foreclosure is successful. Increased risk if the merger increases multi-market contact.		Economies of scope, either production or consumption side (e.g. efficiencies from marketing complements)

Jurisdiction	Foreclosure theories of harm	Co-ordinated effects	Other theories of harm	Efficiencies
Germany ([38])	Strengthening or creation of a dominant position by hindering competitors and preventing entry. Assessed in terms of: • Ability (market power in at least one market, overlap of customers, preference for buying bundles, credible commitment) (pp 59-60) • Incentive (whether the costs from the strategy exceed the benefits, network effects, economies of scale, potential for counter strategies by other competitors through a strategic alliance for example) (pp. 60-61)	Strengthening collective dominance by making it easier to reach terms of co-ordination, increasing market transparency, enhancing ability to publish deviators and reduce or eliminate constraints from potential competitors (pp. 61-62)	• Elimination of "fringe competition" from imperfect substitutes – recognizes that this is likely only to strengthen rather than create a dominant position (p. 58) • Elimination of potential competitor (p. 58) • Portfolio effects risks if consumers value variety and one-stop shopping (p. 61) • Increase of market power by "strengthening the financial or industry-specific resources of the company" (p. 61)	
Japan ([39])	Conglomerate mergers generally not considered harmful unless they enable foreclosure or exclusion (p. 53). Assesses the risk of foreclosure through "combined supply" in terms of: • Ability (most pronounced with high complementarity among products and large share in one market) • Incentive • Effect (whether it leads to exit or makes entry more difficult; particular focus on risk that post-merger firms will withhold confidential information necessary for enabling interconnectivity from competitors (pp 55-56))	Potential for coordinated effects assessed (p. 58)	Elimination of potential competition by limiting access to inputs in related markets, such as data, which could be used to challenge a firm's position in the future (p. 57)	
Korea ([40])	Conglomerate mergers between firms that do not produce complements or substitutes are granted a simplified review, but "mixed combinations" (conglomerate mergers) can result in the exclusion of competitors by limiting their access to common inputs such as raw materials and technical expertise, and may increase entry barriers (pp. 14-15)		Elimination of potential competition (considering potential for entry, the likelihood that the firm would have entered the market but-for the merger) (pp. 14-15)	

Jurisdiction	Foreclosure theories of harm	Co-ordinated effects	Other theories of harm	Efficiencies
UK ([41])	Assesses the ability, incentive and effect of firms engaging in a strategy wherein the price of standalone products would be raised, but they would be offered together at lower prices, which could disadvantage rivals. Assessment considers: "(i) whether customers have a demand for more than one of the products, and whether the products are complements; (ii) customer preferences for variety and one-stop shopping; and (iii) the costs to rivals of providing variety and one-stop shopping at a scale to enable them to compete effectively with the merged firm" (p. 53).	Potential for conglomerate mergers to strengthen incentives to agree to collusion (multi-market contact and the scope of punishment). Foreclosed rivals may also be pressed into accepting collusive outcome (p. 54).		Cost savings, price co-ordination across complements, one-stop shopping.
US ([42])			Elimination of a specific potential competitor discussed as a potential harm of any non-horizontal merger in the current guidelines ([42]); however the new draft guidelines focus on vertical mergers only ([43]).	

76. Further divergences across jurisdictions have also arisen through judicial review, as described in Box 11 below.

Box 11. Conglomerate merger decisional practice in the EU and the US

The pattern of US merger decisions involving conglomerate theories of harm seems to have changed over time. While from 1964 to 1974, US antitrust agencies successfully brought eleven challenges against conglomerate mergers, none of these occurred after 1974. After this wave of conglomerate merger decisions, US senior antitrust officials expressed strong criticisms with respect to the recent conglomerate merger decisional practice and observed how "*after fifteen years of painful experience with these now long-abandoned theories, the US antitrust agencies concluded that antitrust should rarely, if ever, interfere with any conglomerate mergers*." The 1982 Merger Guidelines did not identify any theories of harm on which agencies could challenge conglomerate mergers and, following their issuance, the theories used until then to challenge this type of transactions, such as the entrenchment theory or the increase in aggregate concentration, were gradually abandoned.

By contrast, the same trend in the decisional practice cannot be observed in the EU. Although after the prohibition decisions in *GE/Honeywell* (2001) and *Tetra Laval/Sidel* (2001), for several years the EC did not issue any decisions against conglomerate mergers, the relevance of such transactions for antitrust agencies remained latent. In 2008, the Non-Horizontal Merger Guidelines clarified that, although conglomerate mergers provide substantial scope for efficiencies and in the majority of circumstances do not raise competition concerns, "*in certain specific cases there may be harm to competition*." The greater attention dedicated to conglomerate effects in the EU compared to the US is evident when looking at the EC's recent decisional practice where, unlike US agencies, the EC assessed conglomerate effects and imposed specific remedies to address them, such as in *Intel/McAfee* (2011), *Dentsply/Sirona* (2016), *Worldline/Equens/Paysquare* (2016), *Microsoft/LinkedIn* (2016), *Broadcom/Brocade* (2017), and *Qualcomm/NXP* (2018).

The US and EU respective decisions in *GE/Honeywell* are certainly the most discussed example of the divergence concerning conglomerate mergers.

On 22 October 2000, GE announced its proposed acquisition of Honeywell. GE was a diversified industrial corporation active in the production of aircraft engines, while Honeywell supplied aerospace products and services, including navigation equipment, non-avionic products and jet engines.

On 2 May 2001, the antitrust division of the US Department of Justice cleared the merger subject to the divestiture of the overlapping helicopter businesses. By contrast, on 3 July 2001, the European Commission blocked the transaction, finding it incompatible with the common market.

In particular, concerning the conglomerate issues, the EC found that the merger would lead to bundling of complementary products, with subsequent strengthening of the merged entity's dominant position in the manufacture of jet aircraft engines and avionics and non-avionic products. The EC rejected all the merging parties' claims on the lack of power to impose a bundling and competitors' ability to supply similar bundles or to introduce technological improvements to their products to outcompete the merged entity.

The EU and US antitrust watchdogs had diverging views on several points, in particular on the existence of GE's dominant position, on the credibility of a bundling theory of harm and the consequent foreclosure effects and on the assessment of long-term efficiencies and future pricing strategies. As noted by the US Department of Justice, "*the two antitrust agencies reached fundamentally different conclusions despite analysing the identical product and geographic markets, hearing the same arguments from the parties and third-parties, considering the same theories of harm, and largely having access to the same set of facts*."

Source: European Commission Decision 2004/134/EC, Case COMP/M.2220 – General Electric/Honeywell, 3 July 2001; Department of Justice Press Release: "Justice Department Requires Divestitures in Merger Between General Electric and Honeywell", 2 May 2001, https://www.justice.gov/archive/atr/public/press_releases/2001/8140.htm

77. While the theories of harm described above focus on conglomerate effects in isolation, this may not be common in practice. The mergers that competition authorities review for potential conglomerate effects will, by their nature, likely also involve horizontal or vertical issues. In particular, these mergers can be complex and involve firms with several different types of products. Thus, competition authorities will need to separate potential conglomerate effects related to bundling or tying from concerns more appropriately addressed under horizontal (e.g. potential future competition) or vertical (e.g. input foreclosure) frameworks, and to consider prioritising the different theories of harm.

78. To conduct a preliminary risk assessment, some key indicators of the potential for harm can be drawn from Section 4. In particular, **if the merging firms will have strong market power (or a lack of effective competition) in at least one of the markets affected by the merger, and the other markets exhibit significant entry barriers, economies of scale, or network effects**, then the following risk factors should be assessed:

- The products involved are complements and there are alternative uses or repeated purchases (e.g. due to upgrades) of one of the products.
- The products involved are weak substitutes or unrelated, but they feature substantial overlaps in consumers.
- Bundling or tying is common in the affected markets, or at least one of the firms has engaged in bundling or tying in other markets.
- Technical bundling or tying is feasible.
- The nature of the relationship between the merging firms and their customers could make contractual bundling or tying credible.
- There is a significant likelihood that one of the markets involved in the merger could be used as a stepping stone to challenge the merging firms' market power in another market.
- The merger will increase the symmetry among conglomerate firms in terms of the markets in which they compete, or may enable the differentiation of bundles focusing on segmented consumers (giving rise to potential co-ordinated effects).
- There are indications, due for example to public comments by the merging firms' management, that the post-merger firm's strategy will centre around combining data sets, cross-subsidising markets and denying rivals network effects.
- There have been several past occurrences of vertical restraints in the markets affected by the merger.

79. If at least some of these risk factors are present, competition authorities may need to assess the potential for conglomerate harms more closely. In doing so, they will need to overcome some particular challenges associated with evidence gathering, assessing dynamic effects, meeting the requisite standard of proof, evaluating the trade-off between challenging the merger and conducting ex-post enforcement action, and considering remedies.

7.1. Evidence gathering

80. Assessing conglomerate effects requires first identifying the mergers in which they may emerge. Competition authorities face significant challenges in gathering sufficient evidence to do so. This is because, as opposed to horizontal or vertical mergers, there may be no obvious relationship between the products in question. A comprehensive analysis could uncover links that may give rise to conglomerate effects, such as complementarity, common consumers, common components, sequential market entry and conglomerate firm symmetry, among others. However, these indicators may not always be included in the initial batch of information provided in merger notification procedures to authorities.

81. Further, competition authorities face the risk of delaying merger review, increasing burdens on case handlers as well as merging parties, and facing accusations of engaging in "fishing expeditions" with unfocused information requests that attempt to identify potential conglomerate effects. Thus, authorities will need to select carefully the cases in which a full information-gathering exercise associated with conglomerate effects would be warranted. This may be a particular challenge under voluntary merger notification regimes.

82. Information from the parties regarding the motivations for the merger can help. Authorities may wish to consider whether a further assessment of conglomerate effects would be worthwhile if any of the following are a major theme of the merger justification (keeping in mind that these can be indicators of conglomerate efficiencies as well as conglomerate harms to competition):

- economies of scope
- demand-side efficiencies (such as one-stop shopping for different products)
- better co-ordination of complement pricing and marketing
- bundled discounts
- applying firm assets and know-how into new markets

83. The second key challenge, once it is established that there are at least some preliminary indications that conglomerate theories of harm should be investigated, will be to manage the significant volumes of evidence that may need to be reviewed. In particular, it may be difficult to find evidence that helps to establish the linkages between unrelated markets, particularly overlapping consumer bases, common components, and other factors that could affect the post-merger firms' incentives (e.g. alternative uses for a product that could be tied).

84. Where efficiency-enhancing conglomerate effects, including economies of scope, are a major theme of the merger's rationale, the challenge of in-depth assessment will be to separate out the evidence that will facilitate an economic analysis of the overall impact of the merger on consumer welfare. The key motivations for the merger and its efficiencies, such as bundling to improve user experience, may also be a source of consumer harm in some limited situations. Thus, internal documents that demonstrate the motivations for the

merger may be less helpful for the assessment than in other cases (de Solà-Morales, 2019[44]) – even if clear statements about an intention to foreclose, or cross-subsidise to develop a dominant position, may still be indicative. Evidence gathering to support the economic analysis and assess the indicators noted at the beginning of this section should focus on the characteristics of the products and their production, consumer overlaps, and understanding the competitive dynamics of the markets, among others.

85. Finally, there may also be a particular need for competition authorities to engage in international co-operation, as conglomerate mergers may be more common in transactions involving large multinational firms. Information sharing across authorities, given the evidence gathering challenges noted here, could therefore be of significant value.

7.2. Standards of proof

86. If, as noted above, conglomerate mergers are often neutral or even beneficial to consumers, the question arises as to whether the standard of proof generally required in merger control (i.e. the level of probability that an authority has to reach before prohibiting or clearing a transaction) also applies to conglomerate mergers or whether the evidentiary efforts that competition authorities are required to meet need to be adjusted in light of the lower likelihood for competition concerns.

87. At the outset, rather than investigating only past behaviour, merger control requires a prospective analysis of events that are more or less likely to occur in the future, for instance about how the transaction may affect competition and whether it would substantially lessen competition. When looking at their decisional practice, some authorities, for instance the Bundeskartellamt, rather than focusing on the likelihood of certain future behaviours, primarily consider structural changes brought by the merger, including the consequences of removing potential competition and the increased financial strength of the merged entity (Bundeskartellamt, 2006[15]).

88. In *Secretary of State for the Home Department v Rehman* (2002), Lord Hoffman explained that :

> *... it would need more cogent evidence to satisfy one that the creature seen walking in Regent's Park was more likely than not to have been a lioness than to be satisfied to the same standard of probability that it was an Alsatian.*

89. This reasoning could theoretically be applied to merger control in order to take into account the fact that conglomerate mergers generally do not create a dominant position or significantly impede effective competition in a specific market as a result of a combination of the market shares held by the parties, hence evidence in support of a prohibition decision may need to be particularly convincing. This is what some authors (Lianos and Sokol, 2013[45]) state when highlighting that, although the standard of proof is generally deemed to be the same for all types of mergers, :

> *... it takes more evidential effort to establish a fact that it held to be intrinsically improbable, such as harmful evidence of a conglomerate merger, than it would be to prove to the same standard a fact that is intrinsically more probable, such as the harmful effect of a horizontal merger.*

90. The merger decision in *Tetra Laval/Sidel* is a good example of how this tension in relation to conglomerate mergers has been reflected in EU case law. The transaction concerned the liquid food-packaging sector, which includes two distinct but closely associated neighbouring markets for carton and PET packaging equipment. Given the

technical substitutability between carton and PET packaging material, the EC found that the combination of Tetra's dominant position in carton packaging with Sidel's leading position in PET packaging equipment would provide the merged entity with the ability and incentive to leverage its dominant position in carton packaging on the neighbouring PET packaging equipment; for example by persuading its current carton customers to purchase Sidel's packaging equipment. Absent the merger, Tetra Laval would have to compete strongly in order to avoid losing market share to PET, for instance by innovating and lowering carton prices. By contrast, the transaction would have eliminated this competition and consolidated Tetra's dominant position.

91. Upon appeal, the General Court (GC) seems to have found that a higher standard of proof applies to conglomerate mergers. Although the EU Merger Regulation does not explicitly draw any distinction between mergers with horizontal and conglomerate effects, as to the conditions to issue a prohibition decision, the Court found that in relation to a conglomerate-type merger transaction the EC should determine whether the transaction "in all likelihood" would allow the merged entity to leverage its market power and give rise to anticompetitive effects. Although there is no presumption that conglomerate mergers do not raise any anticompetitive effects, the GC explained that:

> *… since the effects of a conglomerate-type merger are generally considered to be neutral, or even beneficial, for competition on the markets concerned […] the proof of anti-competitive conglomerate effects of such a merger calls for a precise examination, supported by convincing evidence, of the circumstances which allegedly produce those effects. This is due to the even more prospective nature of the analysis of conglomerate-type transactions.*

92. Therefore,

> *Whilst the Court recognises that the Commission has a margin of discretion with regard to economic matters, that does not mean that the Community Courts must refrain from reviewing the Commission's interpretation of information of an economic nature. Not only must the Community Courts, inter alia, establish whether the evidence relied on is factually accurate, reliable and consistent but also whether that evidence contains all the information which must be taken into account in order to assess a complex situation and whether it is capable of substantiating the conclusions drawn from it. Such a review is all the more necessary in the case of a prospective analysis required when examining a planned merger with conglomerate effect.*

93. Following the EC's prohibition, the GC upheld Tetra Laval's appeal and annulled the decision. First, it found that the likelihood of the leveraging conduct must be assessed comprehensively, taking into account the incentives to engage in such conduct, the factors that might reduce those incentives, including the extent to which the unlawful nature of the conduct might affect them, and the commitments offered by the parties regarding their future conduct. In this case, the EC did not duly take into account the commitments offered by the parties regarding their future behaviour nor how the incentives to engage in anticompetitive leveraging practices would be reduced due to the illegality of such conducts and the likelihood of their detection by competent authorities. Second, the GC found that the EC had not provided "*sufficiently convincing evidence*" that the potential leveraging strategy practices with respect to Tetra's current customers would enable the merged entity to extent its dominant position in the neighbouring market for PET packaging equipment.

94. Upon further appeal by the EC on the ground that the GC had unacceptably raised the legal standard, the European Court of Justice (ECJ) upheld the judgment while providing some important clarifications as to the required standard of proof. It stated indeed that, like any merger control case, conglomerate mergers require a prospective analysis concerning a prediction of future behaviour and market structures rather than the examination of past or current events. Like for other mergers, the requirement that conglomerate merger decisions should be based on "*convincing evidence*" does not add any further conditions to the requisite legal standard but "*merely* [draws] *attention to the essential function of evidence, which is to establish convincingly the merits of an argument*." Finally, it rejected a more demanding standard of proof when observing that the prognostic nature of merger assessments "*makes it necessary to envisage various chains or cause and effect with a view to ascertaining which of them are the most likely*."

95. In practice, the ECJ clarified that while, pursuant to the EU Merger Regulation, the standard of proof remains the same for any merger, the required evidentiary efforts might change depending on the intrinsic probability of the events under scrutiny and what the perception of economic normality is (Lianos and Sokol, 2013, p. 52[45]). With regards to conglomerate mergers, competition authorities should provide factually accurate, reliable and convincing evidence of a "*particularly important*" quality and take into account all the relevant factors to prove that if a decision were not adopted, the economic development and risks for competition envisaged would be plausible.

96. Following this case and considering that there is no presumption that bundling and tying strategies are profitable, a question arises as to what the convincing evidence should consist of to prove such a theory of harm in a conglomerate-type merger case to the requisite legal standard and whether there are any specific circumstances on which to focus. Authorities may need to consider whether evidence of the factors described at the beginning of Section 7 can be found.

7.3. Assessing dynamic competition issues

97. Dynamic competition issues are at the core of several conglomerate effect theories of harm. In particular, dynamic effects can be an important mechanism through which bundling, tying and other strategies enabled by conglomerate mergers can generate consumer harm, even if they involve efficiencies that are initially passed on to consumers. If a conglomerate merger leads to the exit of less-efficient competitors, this can be a sign of the competitive process at work. However, harm to dynamic competition can emerge if the post-merger firm is able to foreclose more-efficient competitors from a market, and erect entry barriers that insulate it from future competitive pressures. This can have implications for the incentives to innovate in developing new or better quality products (OECD, 2018[23]). In other words, assessments of conglomerate mergers should pay particular attention to the effects on potential future competition (Bourreau and de Streel, 2019[3]).

98. For example, as noted above, a conglomerate merger that enables bundling or tying can be a strategy to protect the market power of one of the merging firms. In particular, when markets are entered sequentially, it can prevent firms in the tied market from growing and developing into a threat in the tying market.

99. More generally, bundling and tying can erect entry barriers by preventing firms from entering just one of the affected markets. Instead, firms seeking to compete may be obligated to enter multiple markets at once, or rely on the simultaneous entry of other firms

in the other product markets. This means that new entrants will face costs that the existing firms in the market did not. For further discussion on entry barriers and dynamic competition, see OECD (2019, pp. 19-22[46]). Box 12 below sets out the assessment of impacts on dynamic competition, particularly with respect to innovation, in the *Dentsply/Sirona* merger.

Box 12. R&D concerns in *Dentsply/Sirona*

In January 2016, Dentsply notified to the EC its intention to acquire sole control of dental equipment supplier Sirona. The former was active in the market for dental consumables, while the latter supplied dental technology and equipment and chairside computer-aided design (CAD) and computer-aided manufacturing (CAM) systems, used to manufacture dental restorative materials such as crowns and bridges.

Although there were some horizontal overlaps, the EC did not consider them problematic, as the merged entity's market shares were limited, there were several strong competitors and the merger-specific increase in market share was not significant.

By contrast, the EC considered that the merged entity would be able to produce both CAD/CAM systems and blocks. Thus, it was concerned that post-transaction the firm would use Sirona's dominant position in CAD/CAM systems to favour its own CAD/CAM blocks and foreclose Dentsply's competitors, that need access to Sirona's systems in order to compete effectively.

If the merged entity engaged in customer foreclosure in the future, competitors would likely stop investing in research into new technologies. In the EC's views, it was likely that they would slow down or stop innovation in the chairside CAD/CAM blocks, thus making it easier for Dentsply to match their offer and apply a successful foreclosure strategy.

As noted by the EC, "*in the conglomerate case at stake, remedies other than divestiture remedies appear best suited to directly address the concerns raised*." To address these concerns, Dentsply committed to offer each existing licensed block manufacturer the right to continue to supply its CAD/CAM blocks under the existing agreements for ten more years. The duration of such commitments stemmed in particular from the market test that showed how remedies with short duration in an industry requiring intensive research and upfront investments would not be suitable to address competition concerns.

Source: European Commission Decision C(2016) 1311, Case M.7822 – Dentsply/Sirona, 25 February 2016

100. In digital markets, a particular risk may stem from conduct that seeks to deny rivals network effects, including restrictions on consumer multi-homing. Further, if it can be established that the post-merger firm is able to develop a dataset that is both essential to compete and not easily replicable, new entrants may face the significant entry barrier of having to purchase data (Condorelli and Padilla, 2019, p. 45[30]).

101. A further challenge common in digital markets is the rapid evolution of products, which creates uncertainty in a merger review about whether they should be included in the same market, or whether they will in the future compete in the same market. While these concerns are more specifically explored in OECD (2020[33]), some recent studies of digital competition frameworks have proposed addressing uncertainty about future horizontal competition effects by making more extensive use of conglomerate merger theories of harm; namely, the expert report commissioned by the European Commission on

Competition Policy in the Digital Era (Crémer, de Montjoye and Schweitzer, 2019[47]), the German Competition Policy 4.0 expert report (Federal Ministry for Economic Affairs and Energy, 2019[48]) and Bourreau and de Streel (2019[3]).

102. The latter makes some specific proposals for market definition to address these challenges (Bourreau and de Streel, 2019, p. 26[3]):

- Considering the relationships between products within an ecosystem, and potentially defining broader systems markets – although the precedential impact of this strategy on future cases should be considered.
- Defining markets for production capabilities and inputs in addition to product markets in order to capture the concerns noted above about the use of conglomerate mergers to control data or other important inputs - see, for example, OECD (2020[49]).

103. Finally, an assessment of dynamic competition effects should also take into account the potential responses of competitors to bundling, tying or other conduct enabled by the merger. It is notable that most economic models of conglomerate effects do not take into account the ability of competitors to react to the merger with compensatory strategies. For example, to the extent that competitors can engage in a counter-merger, some consumer harm may be reduced (Church, 2008[13]), although this may increase symmetry and give rise to co-ordinated effect risks.

7.4. Considering linkages with ex-post enforcement

104. Conglomerate mergers present authorities with well-established questions about whether to use ex-ante measures, or to wait for potential misconduct and use ex-post enforcement powers. In fact, this debate may be especially relevant for conglomerate mergers given the challenges associated with demonstrating harm to consumers, and uncertainty as to whether firms will follow a given strategy as well as its effects (OECD, 2001[12]).

105. Further, there may be cases in which enforcement tools are not sufficient to address potential harms that could be the focus of merger review. For example, enforcement tools may not in practice be able to address foreclosure strategies using tying or bundling to prevent sequential entry. One exception is Germany, where recent competition law revisions have introduced a new concept of abuse to address these situations, as described in Box 13 below.

Box 13. New abuse provisions related to conglomerate effects in Germany

As noted above, although conglomerate mergers do not usually raise any competition concerns, they can be problematic when they create a risk that the merged entity leverage its strong market position in one market on other closely related markets, for instance through tying or bundling strategies.

The German Commission ‘Competition Law 4.0’ found in its 2019 report that “*conglomerate structures are experiencing a revival in the digital economy*”, with companies expanding into new markets that have little in common with their core business. Certain cross-market corporate strategies might affect competition, for instance a digital company “*could leverage its power onto other markets rather than competing on the* *merits*". The authors therefore recommended "*commissioning a study on cross-market market foreclosure strategies in the digital economy and the potential for countering these via competition law*."

The recent proposal for amendments to the Act against Restraints of Competition (ARC) (GWB-Digitalisierungsgesetz) submitted by the German Federal Ministry for Economic Affairs and Energy contains specific provisions to avoid potential leveraging of market power in neighbouring markets. The draft provisions stem from the acknowledgment of the risk that dominant firms on certain platform or network markets may leverage such power and extend it to neighbouring markets, thus making it more difficult to challenge their dominant position. Therefore, they introduce the new concept of "*paramount cross-market significance*" to allow the Bundeskartellamt to intervene at an early stage in those markets against such large, though not yet dominant, digital players. If the agency finds that such paramount significance exists, be it on one or several markets, it can issue an order prohibiting a number of practices listed in the new law. These include for instance:

- preferential treatment granted to its own services when providing access to supply and sales markets
- hindering competitors active in neighbouring markets where the firm can rapidly expand
- preventing interoperability or data portability.

Source: Commission 'Competition Law 4.0', Report on "A new competition framework for the digital economy", September 2019; Draft Bill of the German Federal Ministry for Economic Affairs and Energy, Entwurf eines Zehnten Gesetzes zur Änderung des Gesetzes gegen Wettbewerbsbeschränkungen für ein fokussiertes, proaktives und digitales Wettbewerbsrecht 4.0 (GWB-Digitalisierungsgesetz), 24 January 2020.

106. However, merger review may also be a more effective way of addressing concerns about conglomerate effects, including anticompetitive outcomes that do not contravene competition law (such as tacit co-ordination through differentiation). Further, as Proctor (2015[50]) notes, remedies to address competition risks in merger review proceedings can be less time-consuming for competition authorities, and less costly for both authorities and the merging parties (especially considering the potential for fines). More broadly, ex-post enforcement remedies may be less effective if they are implemented after the harm to competition has occurred (Church, 2008[13]).

107. While there are no simple approaches to confronting the trade-off between uncertainty in ex-ante procedures and less effectiveness in ex-post procedures, the nature of conglomerate effects suggest that close scrutiny of these mergers may be warranted, but it should be reserved for those with the most apparent potential risks.

7.5. Remedies

108. Conglomerate mergers exhibit several similarities with vertical mergers, namely the significant potential efficiencies, and the fact that the theories of harm centre around specific types of conduct. As a result, competition authorities have generally shown a greater willingness to accept behavioural remedies to address conglomerate or vertical theories of harm. Behavioural remedies allow authorities to address the risks to competition while preserving the efficiency benefits of the merger, as opposed to structural remedies – especially relevant for bundling and tying concerns, for example, which can be designed to reduce competition risks. For instance, since 2009, in 22 decisions that impose remedies to

address non-horizontal theories of harm, the French Competition Authority (2020, p. 301[51]) used behavioural remedies in 18 decisions. This being said, there are some cases in which structural remedies have been used to address conglomerate effects concerns – see Box 14 below.

Box 14. Structural remedies to address potential bundling strategies: the example of *Worldline/Equens/PaySquare*

In February 2016, the EC received notification of a proposed concentration between Worldline and Equens.

Worldline is a payments and transactional service company, while Equens is a payment service provider, offering, through its fully owned subsidiary PaySquare, merchant acquiring services in different EU countries, including Belgium, to allow merchants to accept, process and make payments for payment cards.

Among the purposes of the transaction, there was the possibility to exploit synergies and offer customers the economies of scale of a single European platform.

The EC took into account Worldline's strong position in the provision of point of sale (POS) terminals and merchant acquiring in Belgium. It was concerned that the bundle of terminals and merchant acquiring services would further strengthen Worldline's position on the merchant acquiring market and lead to foreclosure of competitors from the terminal provision market in Belgium.

The EC conducted a balancing of both advantages and disadvantages arising from a bundle of terminals and merchant acquiring services. In light of the market investigation, it considered that it is not always easy, when an issue occurs, to determine whether the source of the problem was the terminal or the merchant acquirer processor, thus there are advantages in having one contact point only. At the same time, customers may benefit from separate purchasing, for instance because they can negotiate better conditions and prices.

The EC concluded that, given the already strong position of Worldline in both neighbouring markets in Belgium, the transaction would further strengthen the merged entity's ability to implement a foreclosure strategy. However, it accepted the commitments offered by the parties, i.e., divestiture of the merchant acquiring business of PaySquare in Belgium, including the entire customer portfolio to enable a competitor to effectively run a viable business.

Source: European Commission Decision C(2016) 2470, Case M.7873 – Worldline/Equens/PaySquare, 20 April 2016..

109. Behavioural remedies applicable to conglomerate mergers could include refraining from full-line forcing and incomplete bundling (but allowing mixed bundling, which provides discounts to consumers but allows separate purchases as well), maintaining interoperability of products to prevent technical tying, or enhancing consumer data portability. While there can be disadvantages with these remedies, including the need for monitoring (which could be overcome with the use of carefully selected trustees to arbitrate disputes, for example), there are numerous examples of their application. Box 15 and Box 16 illustrate some examples of interoperability remedies in conglomerate merger cases.

Box 15. Interoperability remedies applied in conglomerate merger cases: the example of *Intel/McAfee*

The EC's decision in *Intel/McAfee* constitutes a clear example of the application of behavioural commitments to address competition concerns on future behaviour.

In November 2010, Intel, the leading CPU and chipset producer, notified to the EC its proposed acquisition of McAfee, a technology company active in the design and development of security products and services to protect internet connected devices against malicious content.

The EC found that post-transaction Intel would have the ability and incentive to tie its chipsets with its own security solutions and degrade the interoperability of its hardware with other security solutions than McAfee's products. In the EC's views, this strategy would foreclose McAfee's competitors in the endpoint security markets and strengthen Intel's dominant position in the chipset and CPU markets.

The EC found that "*in the conglomerate case at stake, remedies other than divestiture remedies appear best suited to directly address the concerns raised."* Indeed*, "in these circumstances, commitments to grant competitors access to the necessary information may eliminate the competition concerns*." Intel therefore committed to offer in a timely manner all instruction, interoperability and optimisation information for use by third party vendors of endpoint security software on a royalty-free basis. It also offered not to degrade security solutions when they operated on non-Intel microprocessors. In order to render the commitment easily verifiable, Intel provided a precise definition of what would constitute a degrading of interoperability. Finally, in the final set of commitments, it offered a monitoring trustee acting as the EC's "eyes and ears" and a fast track arbitration procedure as a dispute settlement mechanism. Such interoperability remedies with adequate monitoring were deemed sufficient to prevent foreclosure of standalone competitors in the tied market.

Source: European Commission Decision C(2011) 529, Case COMP/M.5984 - Intel/McAfee, 26 January 2011.

Box 16. Focus on interoperability: the EC decision in *Qualcomm/NXP*

Besides the risks regarding the impact of the transaction on competitors' innovation incentives highlighted above, in *Qualcomm/NXP* the EC was also concerned that the merged entity would leverage its significant market power in BCs and NFC markets by tying and bundling. For instance, in the EC's views, there was a risk that Qualcomm would bundle NXP's IP to its patent portfolio in order to increase its bargaining power and allow it to charge higher royalties (or even to cease licensing), e.g. for access to MIFARE by other NFC/SE suppliers. In addition, in the EC's views, the merged entity would have the ability and incentive to engage in degradation of interoperability of third parties' BCs and NFC and SE products, which would likely foreclose standalone providers of those products and push smartphone manufacturers to prefer the merged entity's products.

To address these conglomerate concerns, the merging parties committed to:

- Providing the same level of interoperability between Qualcomm products and NXP products with the corresponding products of other companies for an eight-year period. This would allow device OEMs to consider as a viable and functioning alternative standalone products other than those of the merged entity.
- Continuing to offer licences to access MIFARE technology to third party NFC/SE chip producers on terms at least as advantageous as those available today. This would avoid foreclosure of competitors, given that their inability to offer MIFARE-enabled products at competitive conditions may deteriorate their ability to compete.

Source: European Commission decision C(2018) 167, Case M.8306 - Qualcomm/NXP Semiconductors, 18 January 2018..

8. Conclusion

110. This paper discusses the review of mergers between firms with products that are complements, weak substitutes, or unrelated in the minds of consumers. These mergers, also called conglomerate mergers, are distinct from horizontal mergers, given that the firms involved are not current product market competitors nor in a supply relationship. While they exhibit similarities with vertical mergers given their significant potential efficiency effects, they may also involve more conceptually remote theories of harm, since they do not affect straightforward supplier relationships.

111. Empirical evidence of conglomerate effects is limited, and generally does not provide conclusive proof of competition harm or efficiency effects. However, a new area of research focusing on digital platforms suggests that conglomerate behaviour, or at least the threat of it, can affect competitive dynamics. Further empirical study that focuses on the effects of conglomerate mergers in the digital sector would be of particular value in shaping competition authority assessments of these mergers.

112. Theories of harm based on the economic literature primarily centre around the risk of a post-merger firm tying or bundling products together. The ability and incentive of firms to engage in foreclosure depend significantly on the specific characteristics of a market. For instance, when two products are strict complements, Chicago school theorists suggest that there will be no likely anticompetitive effect from tying or bundling. However, subsequent research suggests that in the presence of a specific set of conditions, competition may be foreclosed, namely: an absence of effective competition in one market, as well as entry barriers, economies of scale, network effects or repeated purchases in the other market. Co-ordinated effect theories of harm have also been identified, although rarely assessed.

113. The prominence of large digital firms has cast a spotlight on conglomerate effects. New research suggests that the factors that increased the likelihood of consumer harm from bundling and tying, including strong economies of scale and the feasibility of engaging in technical tying, are particularly common in digital markets. Theories of harm associated with the envelopment of related markets, increased differentiation through product ecosystems, and tying privacy policies to leverage data advantages across markets, have been developed.

114. These theories of harm are relatively complex and are thought to arise only in a specific set of circumstances. Even if there is a clear incentive and ability to engage in

bundling, tying, or other similar conduct, the overall effect on consumers may be positive. This is because conglomerate mergers may give rise to a range of well-recognised efficiencies, ranging from economies of scale and scope, the co-ordination of pricing and investment decisions across complements, and the re-allocation of internal assets that cannot easily be sold externally.

115. When authorities engage in the in-depth assessment of conglomerate mergers, which occurs rarely compared to horizontal mergers, they face significant challenges. It can be difficult to know where to look when trying to identify preliminary indications of harm. Dynamic competition, the assessment of which involves significant uncertainty, is an implicit part of several conglomerate effects theories of harm. The evidentiary burden for meeting standards of proof in these cases can be significant, and a wider review of conglomerate mergers could inject significant uncertainty.

116. However, despite these challenges, authorities can make use of a set of key indicators of potential competition harm to investigate only those cases where consumer harm is possible (as set out in Section 7). Merger review may nonetheless be the best instrument to address these concerns, as opposed to ex-post enforcement activity. Further, authorities benefit from being able to consider behavioural remedies more extensively than with horizontal mergers, since they are particularly adapted to addressing conglomerate harms while protecting the efficiencies of these mergers.

117. In sum, conglomerate effects of mergers are likely to emerge in only a small set of cases, and they should be assessed with caution given how dependent the theories of harm are to specific conditions in markets. However, the risk of these effects may be particularly pronounced with digital sector mergers, and so authorities may wish retain an openness to both assessing conglomerate effects, and seeking practical behavioural remedies where necessary.

118. Looking ahead, the influence of conglomerate mergers on systemic risk and lobbying power may also require further consideration. While these risks are not captured within existing conglomerate theories of harm, they may undermine the competitive neutrality of government policy and be used to entrench market power. Thus, the competition policy community more broadly may wish to consider whether an additional layer of review is needed to assess these mergers, or whether competition advocacy could be used to minimise the risks related to the advantages of firms with systemically important status or significant lobbying power.

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