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Behavioural Remedies in Oligopolistic Markets under the Indian Merger Control Regime

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Abstract

Competition authorities primarily make use of two types of remedies, namely, "structural" and "behavioural," or a combination of the two[1], before clearing mergers that are likely to cause substantial harm to competition. Of these, structural remedies have been the predominant choice. However, of late, in the wake of the digital revolution and greater emphasis on designing remedies on a case-by-case basis, behavioural remedies have witnessed increased use. To this end, this paper seeks to address the role of behavioural solutions in the oligopolistic market structure under Indian competition law, with a focus on the merger control regime. It also intends to understand and critically analyse the literature on the problem of oligopolistic markets and the approach adopted with respect to remedies employed by the competition authorities of various jurisdictions (including the European Union (EU), the United States of America (USA), Canada, South Korea, Brazil, and India) to address the problem. Furthermore, the paper aims to examine the scope and limitations of behavioural remedies and their potential role in the conditional clearance of mergers. We use the number and nature of merger control investigations in the aforementioned jurisdictions in which behavioural remedies were adopted during 2015–19 to examine the conditions under which these remedies were used. The findings indicate that there is no

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straitjacket rule in the design and implementation of remedies employed while assessing the potential competition harm of mergers. The incidence of the implementation of behavioural remedies varies according to, *inter alia*, the nature of the concerned industry, the nature of competition harm (unilateral/coordinated, vertical/horizontal concerns), and the specific facts of the case.

Keywords: behavioural remedies, oligopolistic market, merger control

1. Introduction

The merger control regime in India became operative on 1st June 2011 along with notifications of Sections 5 and 6 of the Competition Act, 2002. There have been over 750 filings, and CCI is yet to block a single combination. A proposed combination is approved by the CCI if, *prima facie*, it is of the view that the transaction does not or is not likely to cause an appreciable adverse effect on competition (AAEC). This may be referred to as the Phase I investigation, whereby CCI approves notifications within 30 working days. However, if CCI's assessment shows the likelihood of AAEC in the concerned market at the *prima facie* stage, a Phase II investigation is carried out.

From 2014 to April 2021, in approximately 22 cases, CCI made use of remedies to grant clearance in Phase I or, after investigation, Phase II. CCI may employ structural, behavioural, or hybrid remedies as per its discretion. Structural remedies are usually preferred in horizontal mergers and involve the sale of one or more businesses, physical assets, or other rights to address competitive harm in order to maintain or restore the competitive structure of the market (International Competition Network, 2016). Such remedies aim to strengthen an existing player and/or create a new competitor so as to provide independent firms with incentives to maximise profits while preserving some of the efficiencies of a proposed merger. It also involves self-policing and low monitoring costs, is easy to administer, readily enforceable, and accomplished over a short duration. On the other hand, behavioural or conduct remedies are usually preferred in vertical mergers (Wilson, 2020b); these are designed to modify or

constrain the upcoming conduct of merging firms, typically through conditions or restrictions on behaviour that prevent the merged entity from undermining competition (International Competition Network, 2016). There are hybrid remedies as well that may be effective when a merger involves multiple markets or products. Competition is best preserved by structural remedies in some relevant markets and behavioural remedies in others.

CCI has made use of hybrid remedies in granting conditional clearance of mergers in a majority of the cases over the last decade. Only one out of the eight Phase II investigations saw the implementation of behavioural remedies. This landmark combination took place between Larsen and Toubro Ltd. (L&T), Schneider Electric India Pvt. Ltd., and MacRitchie Investments Pte. Ltd. (L&T – Schneider, 2019). In three of the remaining seven Phase II investigation cases, i.e., Bayer/Monsanto (2018), DUL/PVR (2016), and Dow/DuPont (2017), CCI employed a mix of structural and behavioural remedies.

The literature review and analysis presented in the subsequent sections attempt to shed light on the reasoning behind the increasing adoption of behavioural remedies in the merger control regime of various developed and developing jurisdictions, either on a standalone basis or to complement structural remedies. The data on the number and nature of cases in which behavioural or quasi-structural remedies have been employed by various competition jurisdictions has been collated on a best-efforts basis. The dataset is limited to the short duration of five years (i.e., 2015–19).

2. Literature Review

2.1 The Problem of Oligopoly vis-à-vis Antitrust Concern

In order to understand the implications of competition on economic performance, one has to return to the economic theory of perfect competition and compare it with monopolistic and oligopolistic market outcomes. At the outset, perfect competition entails the sovereignty of consumers and producers as price-takers who are able to sell only at the market price. According to neo-classical economic theory, perfect competition

not only enhances allocative and productive efficiency, which will *ipso facto* maximise social welfare, but also maximises consumer welfare and increases dynamic efficiency by stimulating innovation. This follows from the assumption that producers are rational and wish to maximise profit, and thus, will continue to produce and supply as long as it is profitable to do so and goods and services can be acquired at the lowest cost possible.

On the other hand, a monopolist, being a price-fixer, can influence the price either by reducing the volume of its production or by increasing the price. Thus, such a market structure is characterised by allocative inefficiency, also known as "deadweight loss," along with productive and dynamic inefficiency. It is to be noted that the conditions/assumptions of perfect competition and monopoly in their purest form are extremely rare and unlikely to be observed in reality. However, there exist intermediate market structures between the two extreme market structures, such as oligopoly, wherein some firms sell slightly differentiated products and hold and value consumer loyalty, thereby lending the firms some degree of market power.

The problem of oligopolistic markets is considered one of the most difficult problems for competition authorities, particularly due to "tacit coordination" (also called "conscious parallelism," "tacit collusion," etc.), where firms are able to take advantage of certain features of the market and coordinate their behaviour on prices, output, etc., by directly or indirectly taking into account their competitors' strategies and likely reactions that would result in an infringement of antitrust provisions (Amarnath, 2013).

Therefore, with modern markets being characterised by oligopolistic market structures, increasing market consolidation, and greater interdependence between industries, and consequently, higher market power, competition policy emerges as a respite for firms facing resultant anti-competitive outcomes for the preservation of healthy competition in the market. However, according to Whish and Bailey (2015), the competitive process contains an inevitable paradox: one competitor may win by being the most innovative and most responsive to customers' wishes and producing goods and services in the most efficient way possible and

succeed in seeing off its rivals. It would be strange, and indeed harmful, if that firm is then condemned for being a monopolist.

Therefore, in oligopolistic markets, firms are in a position to earn supra-competitive profits by observing each other's reaction function/ behaviour and strategising their own business actions accordingly, while simultaneously having a high degree of resultant responsive limitation such that it will reduce the level/extent of competition in the market. The empirical evidence to illustrate the relationship between market structure, the conduct of firms in the market, and the behaviour of firms is often referred to as the structure–conduct–performance paradigm (SCP paradigm). Competition law seeks to check the actions of firms that can harm the structure of the market, conduct that can foreclose access to market, and mergers and acquisitions that can reduce the number of firms operating in the market so as to maintain or restore a competitive market structure that is likely to have a positive impact on the conduct and performance of firms operating in the market.

Over the years, several studies have been conducted in order to understand the conditions that trigger tacit collusion. One such study was undertaken by Mason (1939) that focused on the relationship between prices and the number of sellers in the market. This led to the emergence of the Harvard School, which found a link between oligopolistic market concentration and supra-competitive profits in the SCP paradigm (Bain, 1968; Kaysen & Turner, 1959), i.e., oligopolies are able to reap supra-competitive profits due to their unreasonable degree of market power (the structural view of oligopolies).

According to the Harvard School and structuralists such as Areeda and Hovenkamp (2017), Turner (1962), and Kaysen (1951), a direct correlation exists between the structure of the market, the conduct of firms on the market, and their performance, and that tacit coordination occurs in a concentrated market structure. This is because market forces are inadequate to challenge the entrenched power of a dominant firm, and leading firms in highly concentrated industries employ conscious parallelism to avoid price competition, thereby earning abnormal profits. Entry barrier is viewed as a principal reason for poor performance of

firms in a concentrated industry, and thus, firms in concentrated markets are more likely to entail anti-competitive conduct. It is for this reason that Turner advocates for structural remedies such as the breaking up of oligopolistic industries to address tacit coordination.

This view was opposed by the proponents of the Chicago School, such as Bork (1978), Easterbrook (1984), and Posner (1979), who opined that behavioural factors affect tacit coordination. For successful coordination to be sustainable, there needs to be high entry barriers and, regardless of market structure, there is an understanding to adhere to a certain price which is monitored, and cheating is detected and punished to reap supra-competitive prices. For tacit collusion to be successful, there is a prerequisite of certain factors (market concentration, barriers to entry, standard product, inelastic demand, costs similarity, etc.). The Chicago School shifted its focus to the measure of the standard of efficiency and consumer welfare instead of just market power pricing effects on consumers, and believed that markets are likely to be self-correcting against any competitive imbalances on their own without intervention by antitrust regulators.

Another completely different approach is adopted by game theorists, according to which, each player takes into account the best strategy of its competitor and accordingly undertakes their own best strategy, ultimately leading to an equilibrium (i.e., all players have adopted their best strategy). Oligopolists play "repeated games," wherein they interact with each other frequently such that different equilibria are achieved, some of which may be collusive. In the finite "one shot" non-cooperative game theory, independent firms will have the incentive to compete rather than collude. However, collusion becomes more likely (Nash equilibrium) in markets where firms meet for a repeatedly infinite amount of time (repeated game), since the trade-off from long-term profits realised with collusion far exceeds the short-term profits achieved with competition (Bagwell & Wolinsky, 2000), such that any oligopolistic firm that decides to cheat or deviate faces the risk of retaliation and may thus be driven out of business.

Studies on tacit coordination showed that four cumulative conditions are required for non-cooperative equilibrium of game theory, i.e., oligopolistic firms must share a common understanding of the price at which collusion takes place; recognition of a credible threat of retaliation against rival cheaters to discourage any deviation from collusion; ability of oligopolists to detect any competitive deviation; and sustenance of tacitly collusive prices by discouraging entry (Yao & De Santi, 2004).

While assessing mergers and acquisitions, competition authorities are concerned not only with possible anti-competitive *ex ante* effects of combinations but also with maintaining or restoring competitive market structures, which can lead to better outcomes for consumers. Therefore, competitive assessment of mergers would typically entail a theory of competitive harm that seeks to investigate why markets will be less competitive post the merger along with the counterfactual (i.e., competitive situation without the merger), with factual evidence in support of the theory of competitive harm.

The assessment of competitive effects of mergers can be complicated at times and is far from simple. Further, devising and implementing effective remedies is a complex process. In 2005, the European Commission (EC) published a *Merger Remedies Study* (DG Comp), in which it reviewed the effectiveness of 96 remedies accepted in 40 cases during 1996–2000. The International Competition Network (ICN) also published the *Merger Remedies Guide* in 2016 to describe the overarching principles that form the basis of sound merger remedies and provide guidance by which remedies may be designed and implemented.

The Organisation for Economic Co-operation and Development (OECD, 2001) recommendation on structural separation in regulated industries suggests that countries should "carefully balance the benefits and costs of structural measures against the benefits and costs of behavioural measures". This includes effects on competition, quality and cost of regulation, corporate incentives to invest, transition costs of structural modifications, and the economic and public benefits of vertical integration.

2.2 Role of Behavioural Remedies in the Merger Control Regime

The need for a remedy arises when competitive harm is likely to emanate from the merger; accordingly, the type of the remedy depends on the nature of competitive harm. The purpose of a remedy is to maintain or restore competition, and it should be directed at and proportionate to address competitive harm.

While most competition authorities prefer structural remedies, a few are relatively open to the use of behavioural remedies. Such preference is justified by the fact that structural remedies are more likely to restore rivalry while behavioural remedies may end up creating distortions in market outcomes.

In contrast to the permanent one-off nature of structural remedies, it is important to note that behavioural remedies pose certain limitations, i.e., they primarily reveal two important weaknesses of the merger control regime: the risk of over- and under-enforcement. However, despite these drawbacks, behavioural remedies can play a significant role, especially when the absence of a suitable buyer makes divestiture impossible. Even when divestiture is possible, behavioural remedies may be more effective when the merger comprises vertical elements that may limit access to infrastructure, eventually resulting in foreclosure.

Ezrachi (2006) discusses two types of errors by competition agencies while assessing a merger transaction: a Type I error, which occurs when a beneficial transaction is prohibited, thus depriving the market of attaining associated efficiencies, and a Type II error, which occurs when a harmful transaction is not detected and is consequently cleared, resulting in competitive detriment. The difficulties in designing, monitoring, and enforcing behavioural remedies may lead to under prescribing them even when, in theory, they may yield efficiencies.

Different competition jurisdictions have diverse views on the scope and categorisation of behavioural remedies. The EU Merger Remedies Notice confers access remedies under "Other Remedies" and refers to the granting of access to key infrastructure or inputs as a structural

remedy. At times, access remedies may be similar to a one-off structural remedy, and at other times, they may require ongoing implementation and monitoring, thereby resembling a behavioural remedy. Rigaud and Loertscher (2020) highlight that access remedies do not neatly fall into the categories of structural or behavioural remedies and that, while they can achieve a structural effect on the market, such an effect is not always guaranteed.

Interestingly, a new study conducted by the French Competition Authority, Autorité de la concurrence, on behavioural remedies in competition law draws a distinction between behavioural remedies and structural commitments by placing in the latter category commitments that are rapidly (instantly) executed and irreversible in nature and which require monitoring for a short period, generally less than a year. Conversely, behavioural remedies are intended to temporarily restrict the competitive behaviour of the parties and are subject to rigorous and continuous monitoring for a variable duration, generally between 5 to 10 years.

There has been increased willingness to use behavioural remedies in case of digital/technology combinations by competition authorities across international jurisdictions due to the inherent nature of entry barriers created by network effects in digital markets. In this context, it may be pointed out that the OECD paper on line of business restrictions (LOBRs) discuss digital platforms that may potentially be included as "natural" (demand-side) monopolies having sufficient direct or cross-platform network effects, which can sometimes be sufficiently strong to drive competition for-the-market rather than competition in-the-market.

Thus, when data is concentrated in the hands of a few large players, it may provide them with a substantial competitive advantage against new entrants. While collection and control of data and dominance are not anti-competitive per se, data sharing as a merger remedy may be necessary while approving mergers and acquisitions that combine specialised user data. It is pertinent to mention that compulsory data-sharing obligation is imposed by competition authorities across jurisdictions as a remedy in different sectors.

3. Methods and Results

In our analysis, we have addressed the research question regarding the conditions under which behavioural remedies have been adopted by the competition authorities of select jurisdictions. For this purpose, data has been compiled on the number and nature of cases in which six different jurisdictions have employed the use of either quasi-structural remedies or behavioural remedies. The duration of our analysis is 2015–19 for all six jurisdictions, i.e., EU, USA, Canada, South Korea, Brazil, and India. The reason for selecting the competition jurisdictions of the EU and the USA is that the Indian competition regime is, for the most part, based on the jurisprudence developed in the EU and the USA, even though the systems differ significantly in terms of the level and quality of enforcement (Chatterjee & Gautam, 2009–12). The selection of South Korea is premised on the idea that, the South Korean Competition Authority is regarded as one of Asia's toughest regulators (Freshfields Bruckhaus Deringer, 2018) and insights derived from their enforcement mechanisms may provide a good standpoint. Brazil has been chosen in light of the country's model being similar to that of India's in terms of the transition from being a highly controlled economy (following a licensing regime between 1947–90 and the enactment of the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP) in India, which may be comparable to the operation of military regime in Brazil from 1964–85) to a freer and more competitive one. Canada's selection stems from the consideration that the country's competition regime has been relatively restrictive compared to other regimes in terms of the kind of remedies employed in its merger control assessment, and hence, we considered it imperative to understand the reasoning behind the same. Accordingly, a comparative assessment of the aforementioned five global jurisdictions vis-à-vis India has been carried out.

In order to classify the conditions under which behavioural remedies have been used, we can make use of a functional relationship between a dependent variable (y) and a list of independent variables (x_i), as described below:

$$y = \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 x_4 + \ldots\ldots\ldots + u_i \quad (1)$$

where α_i denotes the coefficient of independent variables x_i, u_i denotes the error term, and i can take values 1, 2, 3, and so on;

y – Relevance and effectiveness of the remedy;

x_1 – Sector in which the merger is taking place (e.g., telecommunications, healthcare, etc.);

x_2 – Type of merger (horizontal/vertical/conglomerate);

x_3 – Nature of the competition harm that is identified, i.e., whether the merger would result in higher barriers to entry or expansion, higher post-merger prices (resulting from either coordinated or unilateral effects), lower-quality products, reduced incentives to innovate or decline in services;

x_4 – Time period that the remedy would require to be put in place.

The aforementioned independent variables (x_1, x_2, x_3, and x_4) provide a broad overview of some conditions, based on which a competition authority typically makes decisions regarding the kind of remedy to be employed and determine its relevance as well as effectiveness prior to the consummation of a merger. In our study, we have compiled the data for variables x_1 and x_2 for five of the competition jurisdictions (EU, US, Canada, Brazil, and South Korea).[2] In case of India, we have provided a broad overview of some of the most significant mergers that employed behavioural remedies. While we have not compiled a detailed data for variables x_3 and x_4, we have provided a brief overview of the conditions under which some of the cases entailed the use of behavioural remedies.

- **Europe**

Table 1 shows, that behavioural remedies have been used by the EC in 14 mergers, while the corresponding figure for quasi-structural remedies is 9 during 2015–19.

Table 1. Classification of Sector and Type of Merger—EU (2015–19)

Year	Cases entailing quasi-structural remedy (Total number: 9)	Sector	Type of merger
2015	Orange/Jazztel	Telecommunications	Horizontal
	IAG/Aer Lingus	Transport & Infrastructure	Vertical
2016	Worldline/Equens/PaySquare	Financial services	Conglomerate
	Hutchison/Vimpelcom	Telecommunications	Horizontal/Vertical
	Liberty Global/BASE Belgium	Telecommunications	Horizontal/Vertical
	SFR/Dansk Fuels	Energy and Natural Resources	Horizontal/Vertical
2018	Liberty Global/Ziggo	Telecommunications	Horizontal/Vertical
	Energizer/Spectrum Brands	Electronics	Horizontal
	Hutchison/Wind Tre	Telecommunications	Horizontal/Vertical
Year	**Cases entailing behavioural remedy (Total number: 14)**	**Sector**	**Type of merger**
2015	PRSfM/STIM/GEMA	Media/Entertainment	Horizontal
	SNCF/Eurostar	Transport & Infrastructure	Horizontal/Vertical
	Liberty Global/De Vijver Media	Media/Entertainment	Vertical
2016	Dentsply/Sirona	Healthcare	Conglomerate
	Microsoft/LinkedIn	Digital/Technology	Conglomerate
	ASL/Arianespace	Aerospace & Defence	Vertical/Conglomerate

2017	Broadcom/Brocade	Digital/Technology	Vertical/ Conglomerate
	Rolls Royce/ITP	Aerospace & Defence	Vertical
2018	Daimler/ BMW	Transport & Infrastructure	Horizontal/ Vertical
	Discovery/Scripps	Media/Entertainment	Horizontal
	Qualcomm/NXP	Digital/Technology	Vertical/ Conglomerate
2019	Varta AG/Energizer	Electronics	Vertical
	Telia/ Bonnier Broadcasting	Media/Entertainment	Vertical/ Conglomerate
	Vodafone/Liberty Global	Telecommunications	Horizontal

Source: *Press Corner, European Commission.*

Accessed at https://ec.europa.eu/commission/presscorner/home/en

Amongst the 14 merger cases that entailed the use of behavioural remedies, half (7 out of 14) belong to two sectors—Media/Entertainment and Digital/Technology. In more than half of the mergers (9 out of 14) that entailed the use of behavioural remedies, the nature of the merger/ competition concern was either vertical or conglomerate. This highlights the willingness of the EC to employ behavioural remedies in cases with non-horizontal concerns.

In two of the mergers pertaining to Media/Entertainment, *Liberty Global/De Vijver Media* (2015) and *Telia/Bonnier Broadcasting* (2019), higher entry barrier and expansion post the merger was identified as the key competition harm. The transactions relate to different levels of the television (TV) or audio-visual (AV) value chain, i.e., the (upstream) markets for the production and the licensing of TV (or AV) content, the (intermediate) market for the wholesale supply of TV (or AV) channels, and the (downstream) market for the retail supply of TV (or AV) services.

In *Liberty Global/De Vjiver Media*, Liberty Global ("Acquirer") provides TV, broadband internet, and voice telephony services via its cable networks in 12 countries across Europe as well as in certain countries outside Europe.

In Belgium, Liberty Global is the controlling shareholder of Telenet, a cable network owner and operator. De Vijver Media ("Target") primarily broadcasts the Dutch language TV channels *Vier* and *Vijf* through its subsidiary, SBS Belgium. The EC's competition assessment brought out two theories of harm: (a) partial/total input foreclosure and (b) partial customer foreclosure. The transaction gave Liberty Global joint control over De Vijver and therefore, over its two TV channels *Vier* and *Vijf*. It was found that Telenet held a dominant position in the market for the retail provision of TV services. *Vier* and *Vijf* were found to be important inputs for TV distributors, and Telenet's joint control over these inputs was likely to give it the ability and incentive to foreclose its rivals from accessing these channels post-merger. The Commission also assessed whether the transaction would give Telenet the incentive to remove the channels of Medialaan and VRT (i.e., two Flemish broadcasters that compete directly with De Vijver) from its cable platform. It was established that partial customer foreclosure was likely to occur as a result of Telenet placing the channels and programmes of Media and VRT at a disadvantage by, for instance, displaying their video-on-demand (VOD) content less prominently than that of De Vijver.

In *Telia/Bonnier Broadcasting*, Telia ("Acquirer") is a Swedish telecommunication operator, while Bonnier Broadcasting ("Target") is a Swedish media company engaged primarily in the TV broadcasting business. The EC's competition assessment brought out the following theories of harm: (a) partial/total input foreclosure concerns in relation to free-to-air (FTA), basic pay TV, and premium pay TV sports channels; (b) conglomerate competition concerns in relation to Telia's activities as a provider of telecommunication services and Bonnier's activities in the retail supply of AV services, in particular over-the-top (OTT) services, due to potential foreclosure or providers of retail mobile, fixed internet access and multiple play services through tying or mixed bundling practices; and (c) input foreclosure concerns in relation to the sale of advertising space. The EC's concerns related to Telia's competitors in TV distribution being shut out of the market by not having access to certain channels of the merged entity, Telia's competitors in telecom services being shut out of the market by preventing access to the merged entity's streaming services,

and Telia's competitors in telecom and TV distribution shut out from the market by preventing their access to the advertising space on the merged entity's TV channels. In both transactions, one of the primary remedies that was proposed was an access remedy entailing licensing requirements in relation to TV/AV channels on fair, reasonable, and non-discriminatory (FRAND) terms.

In the three mergers pertaining to the digital space, the likelihood of data interoperability being compromised post the merger (that locks in customers to one platform over its rivals, thus creating entry barriers) emerged as the key competition harm.

In *Qualcomm/NXP* (2018), apart from interoperability, there were concerns in relation to the incentive of the merged entity to make it difficult for other suppliers to access NXP's technology, along with the merger giving way to combine the two entities' significant intellectual property portfolios relating to NFC (near field communication) technology. Resultantly, Qualcomm committed to offer licences to NXP's technology and trademarks and follow standards of interoperability, both for a period of eight years, and a commitment not to acquire NXP's standard essential patents.

In *Broadcom/Brocade* (2017), the EC had concerns regarding the complementarity of the products supplied by the merging entities and the sharing of confidential information. The concerns were addressed via interoperability requirements and a commitment to protect third-party confidential information.

In *Microsoft/LinkedIn* (2016), the EC had concerns that Microsoft would pre-install LinkedIn on all Windows PCs and that Microsoft would integrate LinkedIn into Microsoft Office and combine the user database of the two entities. In order to address these concerns, Microsoft agreed to abide by a set of commitments for five years. Two commitments were in relation to interoperability and provision of access. Additionally, it was left to the discretion of PC manufacturers/distributors to install/not install LinkedIn on Windows. Users were also given the leeway to remove LinkedIn from Windows if PC manufacturers/distributors decided to pre-install it.

While the EC has become more receptive to the use of behavioural remedies in the last few years, commitments to behave in a certain predefined manner are not deemed adequate by the EC. Moreover, the EC places great emphasis on the proportionality of the remedy to the identified harm, such that the effect of the remedy being used is the same irrespective of the nature of the remedy, i.e., structural or behavioural. Further, the EC stands out in terms of specifically deeming behavioural remedies as being relevant for use in "digital" markets.

- **USA**

Table 2 shows that behavioural remedies have been used by the USFTC in four of the mergers, while the corresponding figure for quasi-structural remedies is two during 2015–19.

Table 2. Classification of Sector and Type of Merger—USFTC (2015–19)

Year	Cases entailing quasistructural remedy (Total number: 2)	Sector	Type of merger
2015	US Renal Care, Inc./DSI Renal	Healthcare	Horizontal
2017	Red Venture/Bankrate	Digital/Technology	Horizontal
Year	**Cases entailing behavioural remedy (Total number: 4)**	**Sector**	**Type of merger**
2017	Enbridge Inc./Spectra Energy Corp	Energy and Natural Resources	Horizontal/ Vertical
2018	Northrop/Orbital ATK	Aerospace & Defence	Vertical
2019	NEXUS Gas Transmission/ Generation Pipeline	Energy and Natural Resources	Horizontal/ Vertical
	Staples/Essendant	Industrial & Manufacturing	Vertical

Source: *Press Releases, Federal Trade Commission. Accessed at https://www.ftc.gov/newsevents/press-releases.*

In two of the mergers that entailed the use of behavioural remedies, the competition concern was purely vertical. In *Northrop/Orbital ATK* (2018), Northrop ("Acquirer") is one of the four companies capable of supplying the US government with missile systems, while Orbital ATK ("Target") is the premier supplier of solid rocket motors (SRMs)—an essential input for missile systems for propelling missiles to their intended targets. The competition assessment established the following theories of harm: (a) incentive and ability on the part of Northrop to harm competition for missile contracts by either withholding access to its SRMs or increasing SRM prices to competitors which, in turn, could force competitors to raise their respective prices, invest less aggressively to win missile programs (thus hampering innovation), or decide not to compete at all (creating barriers to entry and expansion); and (b) the proposed merger would give Northrop access to the proprietary information that missile contract competitors share with their SRM vendor while also creating a risk that the proprietary information of a rival SRM supplier supporting Northrop's missile system business could be shared with Northrop's vertically integrated SRM business. One of the key highlights that emerged from the merger assessment is that missile systems and SRMs are high-technology, defence-specific products that required specialised facilities to be manufactured, and thus, new competitors were unlikely to enter the market anytime soon.

In *Staples/Essendant* (2019), Staples ("Acquirer") is the largest vertically integrated reseller of office products and one of the only two retail office supply superstores in the US, while Essendant ("Target") is one of the two wholesale distributors of office supplies. The theory of harm that emerged from the merger related to the likelihood of Staples gaining access to commercially sensitive business information on Essendant's reseller customers and the resellers' end customers, which could allow Staples to charge higher prices when bidding against a reseller for an end customer's business.

In *Enbridge Inc./Spectra Energy Corp (2017)*, Enbridge ("Acquirer") and Spectra Energy ("Target") are natural gas transmission companies. The theory of harm related to a reduction in natural gas pipeline competition

in three offshore natural gas producing areas in the Gulf of Mexico that could lead to higher prices for natural gas pipeline transportation from those areas and increase the likelihood of tacit or explicit coordination between two pipelines. The reason for the same could be attributed to the merger giving Enbridge an ownership interest in both pipelines, thus providing access to sensitive information as well as significant voting rights over one of the pipelines.

In *NEXUS Gas Transmission/Generation Pipeline* (2019), Nexus Gas Transmission ("Acquirer") and Generation Pipeline ("Target") operate in the market for pipeline transportation of natural gas. It was found that Nexus's purchase of Generation from North Coast Gas Transmission LLC and several other owners is anti-competitive due to a non-compete clause that keeps North Coast from competing to provide natural gas pipeline transportation in parts of the Ohio counties of Lucas, Ottawa, and Wood for three years after the acquisition closes.

In three out of the four merger settlements (entailing use of only behavioural remedies) during 2015–19, the FTC mandated the establishment of internal firewalls to prevent the leak of confidential information (which could trigger price rise, hampering of innovation and erection of entry barriers).

In *Northrop/Orbital ATK*, the FTC also implemented a supply obligation towards competitors that entailed non-discriminatory pricing, scheduling, quality, etc. The merger between NEXUS Gas Transmission and Generation Pipeline stands out, given that the order of the USFTC particularly required the parties to execute a revised sale agreement eliminating the non-compete clauses therein. Thus, the US has provided conditional clearance to mergers with behavioural remedies even in cases exhibiting purely vertical relations.

- **Canada**

Table 3 shows that behavioural remedies have been used in a single merger investigation in Canada, while the corresponding figure for quasi-structural remedies is six during 2015–19.

Table 3. Classification of Sector and Type of Merger — Competition Bureau Canada (2015–19)

Year	Cases entailing quasi-structural remedy (Total number: 6)	Sector	Type of merger
2016	Parkland/Pioneer	Energy & Natural Resources	Horizontal/ Vertical
2016	Harnois/ DPT	Energy & Natural Resources	Vertical
2016	McKesson/Katz Group	Healthcare	Vertical
2017	Superior/Canwest	Energy & Natural Resources	Horizontal
2017	Bell/MTS	Telecommunications	Horizontal/ Vertical
2018	Metro/Jean Coutu	Healthcare	Horizontal
Year	**Cases entailing behavioural remedy (Total number: 1)**	**Sector**	**Type of merger**
2015	BCE/Rogers/Glentel	Telecommunications	Vertical

Source: *Position Statements, Competition Bureau Canada. Accessed at https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/h_00173.html*

According to the Information Bulletin on Merger Remedies in Canada (2006), "the Bureau will only accept quasistructural remedies, if, once fully implemented, they adequately eliminate the substantial lessening or prevention of competition arising from the merger in the relevant market(s) on a continuing basis without the need for future intervention or monitoring." This reflects the Canadian authority's approach to make use of behavioural remedies only in selective cases, where future monitoring is not a prerequisite. The only merger during 2015–19 in which a standalone behavioural remedy was adopted is *BCE/Rogers/Glentel*

(2015). The transaction concerned the market for retail sale of wireless telecommunications products and services. While the Bureau dismissed unilateral effects, it identified coordinated effects as a competition concern owing to the ownership of GLENTEL by BCE and Rogers that could facilitate access to each other's sensitive information as well as for competing wireless carriers for whom GLENTEL provided distribution services. This could result in consumers paying higher prices for wireless products and services as BCE and Rogers would likely derive critical information on competitors' promotions and subscriber information through GLENTEL, which could affect all sales channels. To ensure competition in the market post the merger, the Bureau mandated the use of administrative firewalls.

In Canada, according to the legal test for a merger remedy (Information Bulletin on Merger Remedies in Canada, 2006), "the remedy need not address all competitive harm that may be caused by the transaction but must reduce it to the point where it is no longer 'substantial'." To understand the approach of the Bureau, the paper has looked at a few mergers that involved the use of quasi-structural remedies. For instance, in *Superior/Canwest* (2017), Superior is Canada's largest national propane retailer, while Canwest operates in the retail bulk propane distribution business in western Canada. It was found that the merger would likely lessen competition substantially in 22 of the 25 relevant geographic markets where Superior and Canwest competed with one another locally in the market for retail sale of bulk propane. The theory of harm related to post-merger price increases that were likely to occur in the 22 markets and high barriers to effective entry (in particular, customer switching costs and existing contracts with incumbent suppliers). The Bureau, however, concluded that no remedy was required in 10 local markets because the efficiency gains resulting from the transaction were likely to clearly and significantly outweigh the likely anti-competitive effects in these markets. Among the remedies imposed, in addition to the sale of assets in the remaining 12 markets, the Bureau required that Superior waive contract terms that impede customer-switching in four markets. These terms

include any terms providing for automatic renewal, exclusive supply or minimum volume requirements, equipment removal, etc.

In *McKesson/Katz Group* (2016), the transaction entailed the proposed acquisition by McKesson of the healthcare businesses of Katz Group, which include the Rexall pharmacy retail chain and the ClaimSecure healthcare claims adjudication business. McKesson is the largest wholesaler of pharmaceutical products, including prescription pharmaceuticals, over-the-counter pharmaceuticals, and health & beauty products, while Katz Group's Rexall retail pharmacy chain is among the largest retailers of pharmaceutical products in Canada. It was found that the merger would likely result in substantial lessening of competition in 26 local markets across Canada. In terms of unilateral effects, it was found that: (a) McKesson could likely disadvantage Rexall's retail rivals by supplying them drugs under less favourable terms or service quality; (b) Rexall could have an incentive to compete less aggressively on these retail products as lost customers would likely switch to rival retailers supplied by McKesson; and (c) wholesale competition from other pharmaceutical distributors and retail competition from pharmacies supplied by a wholesaler other than McKesson were unlikely to effectively constrain McKesson's ability to act on these incentives. The Bureau also identified that the proposed transaction could significantly increase the likelihood of coordination among retail pharmacies owing to the high possibility of sharing of confidential information among two vertically integrated players (McKesson and Katz) collaborating as a result of the proposed merger. To address these issues, the Bureau mandated the establishment of firewalls along with Rexall retail divestitures.

Except *Superior/Canwest* and *Metro Jean Coutu* (2018), in all the other mergers that entailed the use of quasi-structural remedies, both unilateral and coordinated effects were identified as competition concerns. Thus, even in cases where the Bureau was willing to use behavioural remedies, it was particular to use them only in vertical mergers or joint ventures, wherein the risk of coordinated effects persists as a result of the flow of confidential information between the parties (Gudofsky, Salzberger & McNeece, 2019). Further, unlike EC, the Competition Bureau Canada has

been receptive to the use of commitments to behave in a certain predefined manner. For instance, in *Parkland/Pioneer* (2016) and *Harnois/DPT* (2016), both transactions concerned the relevant product market for the retail sale of gasoline. Significant barriers to entry and expansion were found to exist in the relevant markets including, but not limited to, market maturity, high fixed costs, and the need for environmental and regulatory approvals. Apart from carrying out divestments, the Acquirers in the two transactions (i.e., Parkland and Harnois) signed a consent agreement preventing them from increasing any margins earned on the sale of gasoline to their dealers in specific geographical regions.

- **Brazil**

Table 4 shows that behavioural remedies have been used in 14 merger investigations in Brazil, while the corresponding figure for quasi-structural remedies is eight during 2015–19. The principle that the Brazilian authority adheres to while dealing with remedy negotiations include proportionality, timeliness, and feasibility.

Table 4. Classification of Sector and Type of Merger—CADE, Brazil (2015–19)

Year	Cases entailing quasi-structural remedy (Total number: 8)	Sector	Type of merger
2015	GSK/Novartis	Healthcare	Horizontal/ Vertical
	Continental/Veyance	Industrial and Manufacturing	Horizontal/ Vertical
	GVT/Telefónica/ Vivendi	Telecommunications	Horizontal/ Vertical
	Dabi Atlante/Gnatus	Healthcare	Horizontal/ Vertical
2018	Bayer/Monsanto	Agriculture	Vertical
	Praxair/Linde	Energy & Natural Resources	Horizontal/ Vertical
	ArcelorMittal/ Votorantim	Industrial and Manufacturing	Horizontal

2019	Disney/Fox	Media/ Entertainment	Horizontal
Year	**Cases entailing behavioural remedy (Total number: 14)**	**Sector**	**Type of merger**
2015	ALL/Rumo	Transport & Infrastructure	Horizontal/ Vertical
2016	Bradesco/Banco do Brasil/Itaú Unibanco/ Santander/CEF	Financial Services	Vertical
	Saint Gobain/SiCBRAS	Industrial and Manufacturing	Horizontal
	Itaú Unibanco/ Mastercard	Financial Services	Horizontal/ Vertical
	Bradesco/HSBC	Financial Services	Horizontal/ Vertical
2017	Latam/Iberia/British Airways	Transport & Infrastructure	Horizontal
	Itaú Unibanco/Citibank	Financial Services	Horizontal
	BM&F Bovespa/Cetip	Financial Services	Vertical
	AT&T/Time Warner	Media/ Entertainment	Vertical
2018	Itaú Unibanco/XP Investimentos	Financial Services	Horizontal/ Vertical
	WEG/TGM	Energy & Natural Resources	Conglomerate
	Petrotemex/Petrobras	Energy & Natural Resources	Horizontal/ Vertical
2019	SM Empreendimentos /AllChemistry	Healthcare	Horizontal/ Vertical
	NotreDame/Mediplan	Healthcare	Horizontal/ Vertical

Source: *More Press Releases, Administrative Council for Economic Defense (CADE).*
Accessed at http://en.cade.gov.br/more-press-releases.

Among the 14 merger cases that entailed the use of behavioural remedies by CADE during 2015–19, nearly half (6 out of 14) belong to the financial services sector. Eleven of these 14 mergers generate either vertical/conglomerate concerns or both vertical as well as horizontal concerns. Moreover, each of the four cases (i.e., *Bradesco/Banco do Brasil/Itaú Unibanco/Santander/CEF*, *Saint Gobain/SiCBRAS*, *Itaú Unibanco/ Mastercard,* and *Bradesco/HSBC*) in which behavioural remedies were used by CADE in 2016 gave rise to coordinated effects.

In *Bradesco/Banco do Brasil/Itaú Unibanco/Santander/CEF,* the proposed merger gave rise to vertical integration between banks and credit bureaus in the market of solvency and insolvency information on legal and natural persons, as banks are suppliers as well as consumers of the services provided by the bureaus. This could result in discrimination in access to information provided by banks to credit bureaus that will be their competitors after the joint venture, or discrimination in access to banks that are competitors to the new bureau's services. The proposed remedies required guarantees of non-discrimination for competing credit bureaus accessing credit information and corporate governance mechanisms to prevent information exchange between associated banks through the joint venture.

In *Saint Gobain/SiCBRAS,* the proposed merger sought to bring together two competitors in the market for the manufacture of silicon carbide in Brazil. Resultantly, the merger could give rise to an exchange of sensitive information between the two parties. Remedies were imposed to prevent this information exchange.

In *Itaú Unibanco/Mastercard*, the proposed transaction concerned the market for payment arrangements in Brazil that has unique characteristics and a high complexity level. The joint venture was meant to create a new debit and credit card flag in the Brazilian market. In order to ensure that the benefits of "e-wallet" and "tap and go" payment mechanisms were introduced in the market for the benefit of customers, CADE proposed that the merging parties reduce the duration of the joint venture to seven

years instead of 20 years so as to enable CADE to monitor activities in light of the future market structure. Besides, CADE imposed corporate governance mechanisms to ensure the new company's (merged entity) decisions could be equally taken by both parties. Further, it was mandated that a new brand of payment cards be created which cannot refer to Itaú Unibanco or Mastercard.

In *Bradesco/HSBC,* the proposed transaction concerned the banking sector, which is typically characterised by low competition levels due to information asymmetry and transaction costs to which the customers are subjected. It was found that HSBC's acquisition by Bradesco could increase market concentration, specifically within markets directed towards a large number of customers, such as the cash deposit market and the market for free credit to natural or legal persons. CADE imposed behavioural remedies in relation to communication and transparency, credit portability incentives, training, quality indicators, compliance and restrictions regarding the acquisition of financial institutions for 30 months.

In *BM&F Bovespa/Cetip* (2017), as per the Administrative Council for Economic Defense (CADE) the proposed transaction concerned the stock market and over-the-counter market in Brazil. CADE observed that the market exhibited elements of natural monopoly which generated entry barriers, and enabling entry in an industry with natural monopoly leads to inefficient outcomes. Thus, CADE imposed access remedies that mandated access to infrastructure to third parties on a nondiscriminatory basis.

In *Itaú Unibanco/Citibank* (2017), the competition sensitiveness of the banking sector was again taken into consideration, as in the case of *Bradesco/HSBC*, and a similar set of behavioural measures were implemented.

As seen in the aforementioned cases, CADE's use of behavioural remedies seems to be premised, to a large extent, on the unique and complex nature of the industry (banking sector, payments market, stock market, etc.) in which the proposed merger is taking place.

- **South Korea**

Table 5 shows that behavioural remedies have been used in 10 mergers in South Korea, while quasi-structural remedies have been used in only two mergers during 2015–19.

Table 5. Classification of Sector and Type of Merger—Korean Fair Trade Commission (KFTC) (2015–19)

Year	Cases entailing quasistructural remedy (Total number: 2)	Sector	Type of merger
2017	Maersk/HSDG	Transport & Infrastructure	Horizontal/ Vertical
2018	Qualcomm/NXP	Digital/Technology	Vertical/ Conglomerate
Year	**Cases entailing behavioural remedy (Total number: 10)**	**Sector**	**Type of merger**
2015	SeAH Besteel/Posco Specialty Steel	Industrial & Manufacturing	Horizontal/ Vertical
	Hyundai Steel/ Dongbu Special Steel	Industrial & Manufacturing	Vertical
	Hanwha/Samsung General Chemicals	Energy & Natural Resources	Horizontal/ Vertical
	Lotte Department Store/Daewoo Department Store Masan	Consumer & Retail	Horizontal/ Vertical
2017	Esmeralda/DS Power Co.	Energy & Natural Resources	Horizontal/ Vertical
	LG U+/CJ Hello	Telecommunications	Horizontal/ Vertical

2019	Dongbang and SunKwang	Transport & Infrastructure	Horizontal/ Vertical
	SK Broadband/t-broad	Telecommunications	Horizontal/ Vertical
	Global TaxFree and KTis	Financial Services	Horizontal
	SKT/Contents Alliance Platform (CAP)	Telecommunications	Vertical

Source: *Press Release, Korean Fair Trade Commission (KFTC). Accessed at https://www.ftc.go.kr/eng/cop/bbs/selectBoardList.do?key=515&bbsId=BBSMSTR_000000002402&bbsTyCode=BBST18*

Among the 10 merger cases that entailed the use of behavioural remedies by KFTC, the most notable are the three M&A deals that belong to the telecommunications sector, which were approved in 2019 alone. These three hold special relevance, given that they involve the convergence of telecommunications and broadcasting in Korea. According to Chan-ok and Eun-joo (2019), in *SKT/Contents Alliance Platform (CAP)*, the proposed transaction concerned the merger of mobile carrier SK Telecom's video streaming app Oksusu, and POOQ, a joint video-on-demand (VOD) platform jointly owned by three terrestrial broadcasters, i.e., KBS, MBC, and SBS. It was found that, in the relevant market for video streaming content suppliers, competing video streaming service providers would lose access to video streaming content produced by the three terrestrial broadcasting companies as a result of the vertical merger between the parties. The remedies imposed were primarily with respect to the supply of content by the broadcasting channels to other video streaming service providers for three years.

According to Ga-young (2019), in *LG U+/CJ Hello*, the proposed transaction happened between LG U+, a mobile carrier and internet protocol television (IPTV) service operator, and CJ Hello, the primary cable TV operator in Korea. It was found that the merger would have

an anti-competitive effect in the market for 8-level vestigial sideband service (8VSB), which allows consumers who only signed up for analogue broadcasting to receive digital content. Resultantly, higher barriers to entry were likely to prevail because cable TV operators would now also need IPTV service capability to effectively compete in the market, in addition to increased probability, post-merger, of the merged companies increasing subscription rates. As a remedial measure, KFTC mandated LG U+ to not raise subscription prices for cable TV above Korea's headline inflation until 2022 and to not unilaterally reduce the number of cable channels provided by them or coerce customers to switch to expensive subscriptions or digital cable TV.

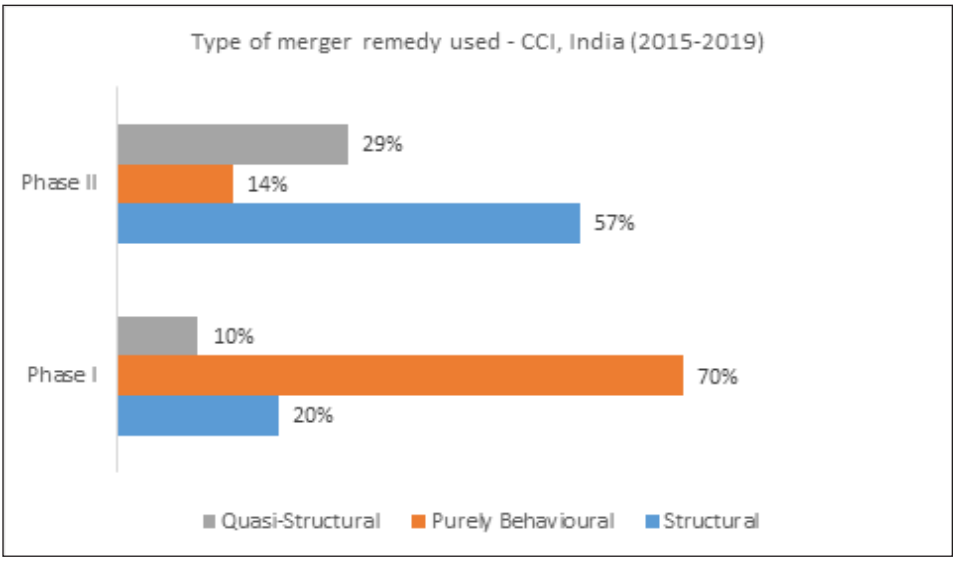
According to Young-sin and Jeehyun (SK Broadband gets conditional approval to merge with t-broad, 2019), in *SK Broadband/T-broad*, the proposed transaction took place between SK Broadband, a fixed broadband subsidiary of SKT, and T-broad, a cable TV operator. Through the merger, the combined entity became Korea's third largest pay TV service provider. Resultantly, anti-competitive effects were due to occur in the market for 8VSB services and paid digital TV. The remedies were similar to those imposed in LG U+/CJ Hello.

Among the two mergers that entailed the use of quasi-structural remedies during 2015–19, *Maersk/HSDG* (2017) gave rise to both coordinated and unilateral effects. The behavioural remedies that were imposed relates to prohibition on sharing confidential information between the merging parties and with other members of the consortium. One of the primary behavioural remedies used by the KFTC in most of the mergers (*SeAH Besteel/Posco Specialty Steel* (2015), *Hanwha/Samsung General Chemicals* (2015), *Lotte Department Store/Daewoo Department Store Masan* (2015), *Esmeralda/DS Power Co.* (2017)) that could potentially give rise to unilateral effects relates to the imposition of price limits.

- **India**

In India, behavioural remedies have been used in eight merger assessments, while quasi-structural ones have been adopted in three during 2015–19. Figure 1 depicts the percentage of Phase I/II merger investigations in which CCI used either of the three types of remedies—

Figure 1. Type of merger remedy used — CCI, India (2015–2019).



Source: *Notices Filed/Orders - Combination, Competition Commission of India (CCI). Accessed at https://www.cci.gov.in/10*

structural, behavioural, or quasi-structural. During 2015–19, 70% of the merger investigations in Phase I witnessed the use of behavioural remedies, while the corresponding figure for Phase II is a mere 14%. An overview of three of the most significant (out of a total of 10) merger assessments that involved the use of either behavioural or quasi-structural remedies in the Indian jurisdiction is provided.

CCI approved the combination of *Bayer/Monsanto* with a wide-ranging package of behavioural remedies to address a variety of competition concerns about horizontal overlaps, vertical foreclosure, innovation, and portfolio effects. This case was a fitting example of the fact that the competition assessment of mergers in innovation sectors is different from that of traditional merger assessments. This is because innovative markets compete on characteristics such as quality, innovation, efficacy, and accuracy, which are considered the non-price effects of a merger; therefore, it is not feasible to quantify such varied aspects of innovation market that generally do not compete on price. One important difference in the instant

merger review is the step that was followed to define the relevant market, where the overlapping R&D activities of parties, specialised R&D assets or technical expertise in the overlapping area, and identification of close substitutes, pipeline products, and portfolios was considered to define the market.

CCI observed that both parties are vertically integrated agricultural companies with significant capabilities in the value chain of supply of agricultural inputs, and since there are substantial entry barriers in the crop protection segment, the proposed combination would create one of the largest vertically integrated players in the global agricultural market. CCI further assessed horizontal and vertical overlaps resulting from the merger and the resultant possible conglomerate effects due to complementary product portfolios of the parties. In the non-selective herbicides market and in the herbicide tolerant traits market, CCI opined that Bayer is one of the few significant alternatives to Monsanto; thus, the proposed combination would eliminate an important competitive constraint from the relevant market. In the market for the licensing of Bt traits for cotton seeds in India, entry barriers were significant and Monsanto had a strong market position. Even though Bayer was not present in the Indian market, CCI held the view that Bayer is one of the few potential competitors with the capability to effectively constrain Monsanto in the relevant market. In the market for the licensing of parental lines or hybrids for corn seeds, the combination would result in the consolidation of two major players in terms of the strength of seed traits and trait stacks.

In order to address the aforementioned concerns, CCI cleared the combination with a mix of structural and behavioural remedies which required Bayer to divest some of its businesses. The behavioural remedies included a commitment by Bayer that the combined entity would not offer its clients, farmers, distribution channels, and commercial partners bundled products that might potentially have the effect of excluding competitors, and Bayer would follow non-exclusive licensing on a FRAND term for seven years. Bayer also undertook providing access through licences on FRAND terms for seven years to existing Indian agro-climatic data, subscriptions to the combined entity's digital farming products,

and platforms commercialised in India, along with access to Indian agro-climatic data free-of-charge to the government of India institutions in order to create public good in India.

The above decision is not based on the presumption of innovative effects, but a meticulous analysis of facts and circumstances of situations in the Indian scenario, and the instant case sets a precedent for upcoming mergers for innovative markets in the near future. Further, the remedies reveal that CCI considered it better to nip the antitrust concerns in the bud rather than use *ex post* instruments under the Competition Act, keeping in view that such *ex post* instruments may be counterproductive and against the interest of consumers.

CCI's recent approval of *Schneider/L&T* case involving the consolidation of the top two leading players in the low voltage (LV) switchgear market in India is significant since it is the first of its kind insofar as it mandates pure behavioural remedies for a horizontal merger. The notice was filed by Schneider Electric India Private Limited (SEIPL/Schneider) and MacRitchie Investments Pte. Ltd. (MacRitchie), wherein Schneider would acquire the electrical and automation (E&A) business of Larsen & Toubro Limited (L&T) as a going concern on a slump sale basis. After the said acquisition, MacRitchie would acquire 35% of the shareholding in SEIPL.

In India, Schneider operates through its subsidiaries and, *inter alia*, offers products and services relating to E&A business. MacRitchie does not have any business operations other than holding investments. L&T is a technology, engineering, construction, manufacturing, and financial services conglomerate. The E&A Business of L&T comprises the manufacture and sale of low- and medium-voltage switchgear components, custom-built low- and medium-voltage switchboards, electronic energy meters/protection (relays) systems, and control and automation products.

Twenty-nine products/solutions were identified as exhibiting horizontal overlaps, and it was observed that most of the overlapping products were components of either the main LT Panel/switchboard (for connecting large industrial or commercial buildings to the medium-

voltage network), sub-main LT Panel/switchboard (typically used for floors in buildings), or a final panel board (for end-users with low energy requirements, such as the occupants of an apartment). Given the preference and industry practice for the use of same-brand products, CCI considered it appropriate to assess the proposed combination at the level of each overlapping product/component and the markets for clustered products.

An in-depth investigation was undertaken by CCI, and it held the view that the proposed combination is likely to cause AAEC in six product markets. It would result in the consolidation of the first and second leading players in the market with the widest range of offerings in the market along with the largest distribution channel. It was observed that the degree of contestability is low and there is no likelihood of an entry that would be timely and sufficient in scope to act as a competitive constraint to the merged entity, and the cost to rivals of competing and increasing their presence in the market would be much higher. The parties had high combined market shares in six overlapping markets (higher than 40%). These were also the six products which the Acquirers admitted to being clustered in general. The market investigation suggested that L&T is the most entrenched brand in India, with the maximum installations, so the discontinuation of its offering would lead to an increase in the cost of replacement, as replacement with other brand products is time-consuming and involves alteration to the existing architecture of the given panel. In addition, there was a concern that the combined entity would lock a larger part of the distribution network and other downstream players. Thus, the combined entity would result in a reduction of competitive/economic choice to consumers, increased price, and entry barriers.

CCI initially proposed addressing these concerns by divestments of L&T's business operations with respect to the six products. However, the Acquirers argued that such divestments would be unviable and disproportionate since the plants were multi-product integrated plants, and carving out specified product business alone may lead to inefficient outcomes. The combination was approved subject to certain behavioural modifications aimed at eliminating the likely anti-competitive harm. CCI

noted that the primary purpose of the remedy is to preserve the present independent economic options/choices available to consumers which would be lost because of the proposed combination, and that modifications should be such that they allow for the establishment of independent competitors in the relevant market(s) or strengthening existing competitor(s) for the concerned markets. Accordingly, the combination was cleared with certain behavioural remedies which, *inter alia*, included white-labelling arrangements with third-parties of five products of the target for a five-year period; provision of a non-exclusive technology licence for a further five-year period to one of the third-parties that had availed of the white-labelling; distribution-related remedies to remove *de facto* exclusivity (i.e., deletion of termination clause, discontinuation of loyalty rebates, etc.); and price cap and commitments in relation to R&D, exports, and non-rationalisation of L&T products.

The instant case highlights the peculiar/distinct facts and circumstances of the case, i.e., the highly integrated and indivisible nature of the LV switchgear industry, and a structural remedy would effectively defeat the objective of the remedy. Therefore, behavioural remedies were adopted to create viable, credible, and long-term competitors to address competition harm. Until now, the CCI's preferred remedy in horizontal mergers has been the straightforward divestment or a mixed/hybrid remedy. However, this is a classic case, wherein CCI has not followed a straitjacket rule and instead relied on a case-by-case analysis of combination after considering the peculiarities of each case.

An interesting case of merger control in digital markets with network effects is the *OLA/HMC* (2019) case, which involved the acquisition of a minority stake by Hyundai Motor Company (HMC) and Kia Motors Corporation (KMC) in ANI technologies Pvt. Ltd. (ANI/ OLA) and Ola Electric Mobility Private Limited (OEMPL). HMC is engaged in the business of manufacturing and distribution of automobiles, automobile parts, and accessories, after-sales services, and R&D of automotive engineering across several countries. KMC is also engaged in the manufacture of automobiles, their parts, and accessories, as well as after-sales services across several countries, and belongs to the HMC group. OLA/ANI is

stated to be a ride-sharing company that facilitates transportation services through an online platform, ensuring convenient, transparent, and quick service fulfilment. OEMPL is an affiliate of OLA and is at a nascent stage of operation in the electric vehicles (EVs) value chain, with its primary focus on the market of charging infrastructure. In addition, OLA has a wholly owned subsidiary, viz., OLA Fleet Technologies Private Limited (OFT), which is engaged in the business of operational car leasing.

The Indian radio taxi market exhibits a duopoly market structure, with approximately 90% of the market share accounted for by OLA and Uber, with few fringe players. In the radio taxi market, CCI identified concerns in relation to vertical linkage among the parties. In the instant case, OLA, a vertically integrated leader in the radio taxi market venturing into OFT indirectly created an inherent conflict of interest and potential concern of "self-preferencing" of HMC or KMC cars on the ANI platform. CCI observed that a substantial majority of the vehicles leased by OFT are registered in the marketplace of OLA.

Platforms that are vertically integrated with suppliers riding on the platform can distort the level playing field for other players, and preferential treatment to HMC or KMC vehicles may accentuate that conflict of interest and also distort the level playing field for non-HMC and non-KMC drivers, resulting in disadvantaged access to OLA's network for non-HMC/non-KMC drivers. Voluntary modifications were offered by the parties to ensure that the ANI platform would act in an objective manner and not result in discriminations against any driver who does not drive a vehicle of HMC or KMC make.

In order to address the aforesaid theory of harm and ensure that preferential treatment/discrimination with respect to the brand of cars will not be provided to vehicles plying on the ANI platform, CCI approved the transaction with the following behavioural commitments: (a) the parties shall cause to procure that the strategic collaborations envisaged pursuant to the Strategic Co-operation Agreement (which are proposed to be subsequently agreed between the parties by way of a separate Business Cooperation Agreement) shall be on a non-exclusive basis; and (b) the Target shall cause to procure that the algorithm/programme of the Radio

Taxi Marketplace shall not (i) give preference to the driver based solely on the brand of passenger vehicle(s) manufactured by the Acquirers or (ii) discriminate against any driver based solely on the brand of passenger vehicle(s) manufactured by any other automobile manufacturer (i.e., other than the Acquirers).

4. Conclusion

Analysis of the data on the type of remedies adopted by six jurisdictions during 2015–19 shows that the EC and Brazil have made use of "behavioural remedies" in a significantly higher number of mergers, followed by India and South Korea, which have shown an increasing inclination towards such remedies, with a moderate degree of use. USA and Canada, on the other hand, have been more selective in terms of the remedies they chose to adopt.

Further, analysis of data on the type of merger/competition concerns in different jurisdictions highlights that vertical/conglomerate mergers are more often subjected to behavioural remedies and typically constitute a longer duration, ranging from 3–8 years and, at times, 20–25 years depending on the type of behavioural remedy employed. For instance, a behavioural remedy that constitutes firewalls may be imposed for a fairly longer duration of 20–25 years (as was done by EC in ASL/Arianespace) while the imposition of price limits (as in a number of mergers in South Korea) and access remedies (as in the case of the digital mergers in EC and number of cases in India) may be imposed for a relatively shorter duration of 3–8 years.

With regard to the nature of competition harm, the analysis is reflective of the fact that mergers that give rise to coordinated effects/tacit collusion may likely lead to sharing of sensitive information between parties to the detriment of their competitors either in a vertical supply chain or in a horizontal merger. This adversely affects prices, creates entry barriers, and hampers innovation at the same time. Behavioural remedies, particularly the implementation of firewalls, mechanisms of corporate governance, and imposition of price limits, may be useful in such a scenario, as is evident from the analysis.

The sectoral segregation of mergers shows that the adoption of behavioural remedies may be steered by the nature of the industry in which the proposed merger takes place. Brazil is a case in point, where CADE, in several merger assessments, specifically took into consideration the competition sensitiveness of the banking sector driven by high entry barriers and low competition, features of natural monopoly exhibited in the stock market and the over-the-counter market that makes the entry of other players result in inefficient outcomes, and the unique and complex nature of the payments market. The EC, too, acknowledged the importance of behavioural remedies in digital/technology markets, where the primary issue does not typically concern the elimination of a rival, and instead, relates to the provision of access to key inputs/infrastructure. This is primarily because digital markets are characterised by high entry barriers due to the existence of network effects. Opaque data practices and data privacy further reinforce these barriers, thereby reducing alternatives for consumers to switch to a different platform. Even in the case of India, CCI made use of behavioural remedies to approve a merger that combined specialised user data. The merger of Bayer/Monsanto was approved by CCI under the condition that the combined entity will grant access of Indian agro-climatic data on fair, reasonable, and non-discriminatory terms to potential licensees. In Canada, behavioural measures were imposed in two of the mergers that took place in the energy and natural resources sector, where the Bureau took into consideration the nature of the industry, specifically market maturity, high fixed costs, and environmental and regulatory approvals.

There are no "one-size-fits-all" merger remedies, and the incidence of usage of behavioural remedies vary, *inter alia*, according to the nature of the concerned industry, competition harm, and the specific facts of the case. Access commitments can serve as important instruments in vertical mergers that may generate exclusionary effects that restrict competition across the vertical. Behavioural commitments can serve as an effective tool if it is not necessary to change the competitive structure of the market to alleviate competition harm while restoring efficiency gains to be attained from the transaction.

Merger proceedings are typically bilateral in nature, wherein negotiations take place between the merging parties and the Commission. There may be instances where the parties have an incentive to conceal or provide information that may be in their favour, thereby limiting factors for the identification of tacit coordination, especially in horizontal mergers, thereby risking the occurrence of a Type II error. In order to address such risk of under-enforcement of the merger control regime, CCI may undertake in-depth market investigations/market studies to understand and assess the market structure and the positioning of rival competing firms therein, including pricing strategies, business models, cost information, investments, etc. Section 49 of the Competition Act, 2002, empowers CCI to undertake competition advocacy including market studies, which can further lead to recommendations for governments, sector regulators, industries, and industry associations. CCI may also strengthen its international cooperation network in case of global mergers in the early assessment stage to avoid conflicting remedies and design common or interconnected remedies, given that the remedies in one jurisdiction can have an impact on other jurisdictions.

Going forward, one can emphasise the *ex post* enforcement mechanism considering the costs and errors resulting from *ex ante* enforcement against tacit collusion. *Ex post* assessment of behavioural merger decisions can be an important toolkit to assess previous merger review decisions and improve the quality of future merger decisions. It can also help understand market conditions post-merger and assess whether the conditions for the adoption of a certain remedy was correct during the period of review given the information available during that time, and whether it was in sync with CCI's policy goals, all of which could sharpen its merger control regulation.

Endnotes

[1]Referred to as "hybrid/quasi-structural" remedies.

[2]For our analysis, we have classified access remedies under behavioural remedies.

References

Administrative Council for Economic Defense (2017). *CADE approves with restrictions the transaction between BM&F Bovespa and Cetip*. http://en.cade.gov.br/press-releases/cade-approves-with-restrictions-the-transaction-between-bm-f-bovespa-and-cetip

Administrative Council for Economic Defense. (2016). *CADE approves with restrictions joint venture between banks in the sector of credit information services*. http://en.cade.gov.br/press-releases/cade-approves-with-restrictions-joint-venture-between-banks-in-the-sector-of-credit-information-services

Administrative Council for Economic Defense. (2016). *CADE approves with restrictions joint-venture between Saint Gobain and SiCBRAS in the silicon carbide market.* http://en.cade.gov.br/press-releases/cade-approves-with-restrictions-joint-venture-between-saint-gobain-and-sicbras-in-the-silicon-carbide-market

Administrative Council for Economic Defense. (2016). *CADE approves, with restrictions, joint venture between Itaú Unibanco and Mastercard.* http://en.cade.gov.br/press-releases/cade-approves-with-restrictions-joint-venture-between-itau-unibanco-and-mastercard

Administrative Council for Economic Defense. (2016). *CADE authorizes HSBC's acquisition by Bradesco."* http://en.cade.gov.br/press-releases/cade-authorizes-hsbc2019s-acquisition-by-bradesco

Administrative Council for Economic Defense. (2017). *CADE authorizes the acquisition of Citibank retail business by Itaú-Unibanco*. http://en.cade.gov.br/press-releases/cade-authorizes-the-acquisition-of-citibank-retail-business-by-itau-unibanco

Amarnath, A.B. (2013). The oligopoly problem: Structural and behavioural solutions under Indian competition law. *Journal of the Indian Law Institute*, *55*(3), 283–306. https://www.jstor.org/stable/43953671

Antitrust in Asia – The business impact of fast-evolving competition laws. (2018). *Freshfields Bruckhaus Deringer.* https://www.freshfields.

com/49fad8/globalassets/our-thinking/campaigns/antitrust-in-asia/06304_pg_act_asia-guide_aw_new.pdf

Areeda, P. E., & Hovenkamp, H. (Eds.) (2017). *Antitrust Law: An Analysis of Antitrust Principles and their Application* (Vol. I).

Bain, J. S. (1968). *Industrial Organisation* (2nd ed.). John Wiley & Sons.

Bagwell, K. & Wolinsky, A. (2000). *Game theory and industrial Organisation* [Discussion Paper #0102-36]. Columbia University.

Bork, R. H. (1978). *The Antitrust Paradox: A Policy at War with Itself*. Free Press.

Chan-ok, S., & Eun-joo, L. (2019). *S. Korea's mega OTT platform Wavve readies for launch next month*. Pulse. https://m.pulsenews.co.kr/view.php?year=2019&no=646827

Chatterjee, P. & Gautam, S. (2009–12). *Competition Law in India Vs USA and EU*. LegalEra. http://www.nishithdesai.com/fileadmin/user_upload/pdfs/New_Competition_Law_in_India_vs_USA_and_EU.pdf.

Combination Registration No. C-2015-07-288, Order dated 04.05.2016. (2016). Competition Commission of India. https://www.cci.gov.in/sites/default/files/Notice_order_document/C-2015-07-288.pdf

Combination Registration No. C-2016/05/400, Order dated 08.06.2017. (2017). Competition Commission of India. https://www.cci.gov.in/sites/default/files/Notice_order_document/Order%20-31_400%2018.07.2017_Public%20Version%20-%20WebUpload.pdf

Combination Registration No. C-2017/08/523, Order dated 14.06.2018. (2018). Competition Commission of India. https://www.cci.gov.in/sites/default/files/Notice_order_document/Order_14.06.2018.pdf

Combination Registration No. C-2018/07/586, Order dated 18.04.2019. (2019). Competition Commission of India. https://www.cci.gov.in/sites/default/files/Notice_order_document/Public1.pdf.

Combination Registration No. C-2019/09/682, Order dated 30th October, 2019. (2019). Competition Commission of India. https://www.cci.gov.in/sites/default/files/Notice_order_document/OLA-Hyundai.pdf.

Commission Decision of 12 May 2017 in Case M.8314 Broadcom/Brocade. (2017). European Commission. https://ec.europa.eu/competition/mergers/cases/decisions/m8314_662_3.pdf

Commission Decision of 12 November 2019 in Case M.9064 Telia Company/Bonnier Broadcasting Holding. (2019). European Commission. https://ec.europa.eu/competition/mergers/cases1/202115/m9064_4071_3.pdf

Commission Decision of 13 December 2019 in Docket No. C-4691 DTE Energy Company, Enbridge, Inc., and Nexus Gas Transmission LLC. (2019). United States Federal Trade Commission. https://www.ftc.gov/system/files/documents/cases/191_0068_c-4691_dte-enbridge_decision_and_order_public_version.pdf

Commission Decision of 18 January 2018 in Case M.8306 Qualcomm/NXP Semiconductors. (2018). European Commission. https://ec.europa.eu/competition/mergers/cases/decisions/m8306_3479_3.pdf

Commission Decision of 22 March 2017 in Docket No. C-4604 Enbridge Inc./Spectra Energy Corp. (2017). United States Federal Trade Commission. https://www.ftc.gov/system/files/documents/cases/170327c4604_decision_and_order_.pdf

Commission Decision of 24 February 2015 in Case M.7194 Liberty Global/Corelio/W&W/De Vjiver Media. (2015). European Commission. https://ec.europa.eu/competition/mergers/cases/decisions/m7194_20150224_20600_4264271_EN.pdf

Commission Decision of 25 January 2019 in Docket No. C-4667 Staples, Inc./Essendant, Inc. (2019). United States Federal Trade Commission. https://www.ftc.gov/news-events/press-releases/2019/01/ftc-imposes-conditions-staples-acquisition-office-supply

Commission Decision of 3 December 2018 in Docket No. C-4652 Northrop Grumman Corporation/Orbital ATK. (2018). United States Federal

Trade Commission. https://www.ftc.gov/system/files/documents/cases/181_0005_c-4652_northrop_grumman_orbital_atk_modified_decision_and_order_12-4-18.pdf

Commission Decision of 6 December 2016 in Case M.8124 Microsoft/LinkedIn. (2016). https://ec.europa.eu/competition/mergers/cases/decisions/m8124_1349_5.pdf

Competition Bureau Canada: Information Bulletin on Merger Remedies in Canada (2006). Government of Canada. https:// www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/02170.html

Competition Bureau statement regarding BCE and Rogers' acquisition of GLENTEL. (2015). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03924.html

Competition Bureau statement regarding Le Groupe Harnois Inc.'s proposed acquisition of Distributions pétrolières Therrien Inc.'s gasoline supply arrangements. (2016). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04106.html

Competition Bureau statement regarding McKesson's acquisition of Katz Group's healthcare business. (2016). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04174.html

Competition Bureau statement regarding METRO Inc.'s acquisition of The Jean Coutu (PJC) Group Inc. (2018). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04363.html

Competition Bureau statement regarding Parkland's acquisition of Pioneer. (2016). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04053.html

Competition Bureau statement regarding Superior Plus LP's proposed acquisition of Canwest Propane from Gibson Energy ULC. (2017). Government of Canada. https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04307.html#sec8

DG COMP. (2005). Merger remedies study. *European Commission*. https://ec.europa.eu/competition/mergers/legislation/remedies_study.pdf

Easterbrook, F. H. (1984). "The limits of antitrust". *Texas Law Review*, 63(1).

Ezrachi, A. (2006). Behavioural remedies in EC merger control—scope and limitations. *World Competition, 29*(3). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=823944

Ga-young, P. (2019). *Gov't approves merger of LG Uplus-CJ Hello merger.* The Investor. http://www.theinvestor.co.kr/view.php?ud=20191215000217

Gudofsky, J., Salzberger, D., & McNeece, K. (2019). *Merger remedies guide – Second edition - Canada*. Global Competition Review. https://globalcompetitionreview.com/insight/merger-remedies-guide-second-edition/1209564/canada https://globalcompetitionreview.com/insight/merger-remedies-guide-second-edition/1209566/india

International Competition Network. (2016). *Merger remedies guide.* https://www.internationalcompetitionnetwork.org/wp-content/uploads/2018/05/MWG_RemediesGuide.pdf

Kaysen, C. (1951). Collusion under the Sherman Act. *The Quarterly Journal of Economics*, *65*(2), 263–270.

Kaysen, C., & Turner, D.F. (1959). *Antitrust Policy*. Harvard University Press.

Korea Fair Trade Commission. (2015). *KFTC gave conditional approval to Lotte Department Store's acquisition of Daewoo Department Store Masan.* http://www.ftc.go.kr/solution/skin/doc.html?fn=ae0cdbe056aa43660c86d9bbdbf09be1f0d2c893582f446f997105c8df3c3a8e&rs=/fileupload/data/result/BBSMSTR_000000002402/

Korea Fair Trade Commission. (2017). *KFTC sanctions a merger between waste heat supplier and CES supplier in Osan.* http://www.ftc.go.kr/solution/skin/doc.html?fn=8cbd15052b4e6dceb9ab1c808763c6a0d919afaa0a16410d621047df25744694&rs=/fileupload/data/result/BBSMSTR_000000002402/

Korea Fair Trade Commission. (2015). *Remedies imposed against SeAH Besteel's taking over of Posco Specialty Steel.* http://www.ftc.go.kr/

solution/skin/doc.html?fn=7d391fb5cbe9f55e215f040c4e0d0cbf7690d08c70922bece9bf2cddbebb2f98&rs=/fileupload/data/result/BBSMSTR_000000002402/

Korea Fair Trade Commission. (2015). *Remedies imposed against the proposed merger deal between Hanwha and Samsung General Chemicals*. http://www.ftc.go.kr/solution/skin/doc.html?fn=bda748a12c261c61e6fa67222cb669be31b7168c0076ecc6028c62874e180f59&rs=/fileupload/data/result/BBSMSTR_000000002402/

Korea Fair Trade Commission. (2017). *KFTC orders the world's no. 1 & 7 shipping companies to withdraw from shipping alliances and not to extend the contract*. http://www.ftc.go.kr/solution/skin/doc.html?fn=712051aff0ab1df14cb347ca6cf565ca227c085cedb2cf919e8286e2e35a1179&rs=/fileupload/data/result/BBSMSTR_000000002402/

Maier-Rigaud, F., & Loertscher, B. (2020). *Structural vs. behavioral remedies*. Competition Policy International. https://www.competitionpolicyinternational.com/wp-content/uploads/2020/04/CPI-Maier-Rigaud-Loertscher.pdf

OECD. (2001). *Recommendation of the OECD council concerning structural separation in regulated industries*. http://www.oecd.org/daf/competition/OECD-Recommendation-on-Structural-separation-regulated-industries.pdf

Posner, R. (1979). The Chicago School of antitrust analysis. *University of Pennsylvania Law Review*, *127*(4), 925–948.

Turner, D. (1962). The definition of agreement under the Sherman Act: Conscious parallelism and refusals to deal. *Harvard Law Review*, *75*(4), 655–706. https://www.jstor.org/stable/1338567

Whish, R., & Bailey, D. (2015). *Competition Law* (8th ed.). Oxford University Press.

Wilson, T. (2020a). Merger remedies in India: Having an upper hand. *Kluwer Competition Law Blog*. http://competitionlawblog.kluwercompetitionlaw.com/2019/04/01/merger-remedies-in-india-

having-an-upper-hand/?doing_wp_cron=1591182132.7083458900451660156250.

Wilson, T. (2020b). *Merger remedies – Is it time to go more behavioural*. Kluwer Competition Law Blog. http://competitionlawblog.kluwercompetitionlaw.com/2020/02/21/merger-remedies-is-it-time-to-go-more-behavioural/?doing_wp_cron=1591936146.4525148868560791015625

Working Party No. 2 on Competition and Regulation. (2020). *Lines of business restrictions – Background note*. OECD. https://one.oecd.org/document/DAF/COMP/WP2(2020)1/en/pdf

Yao, D. A., & De Santi, S. (2004). Game theory and the legal analysis of tacit collusion. *Antitrust Bulletin*, *38*(1).

Young-sin, L., & Jeehyun, C. (2019). *SK Broadband gets conditional approval to merge with t-broad*. Pulse. https://pulsenews.co.kr/view.php?year=2019&no=1099540