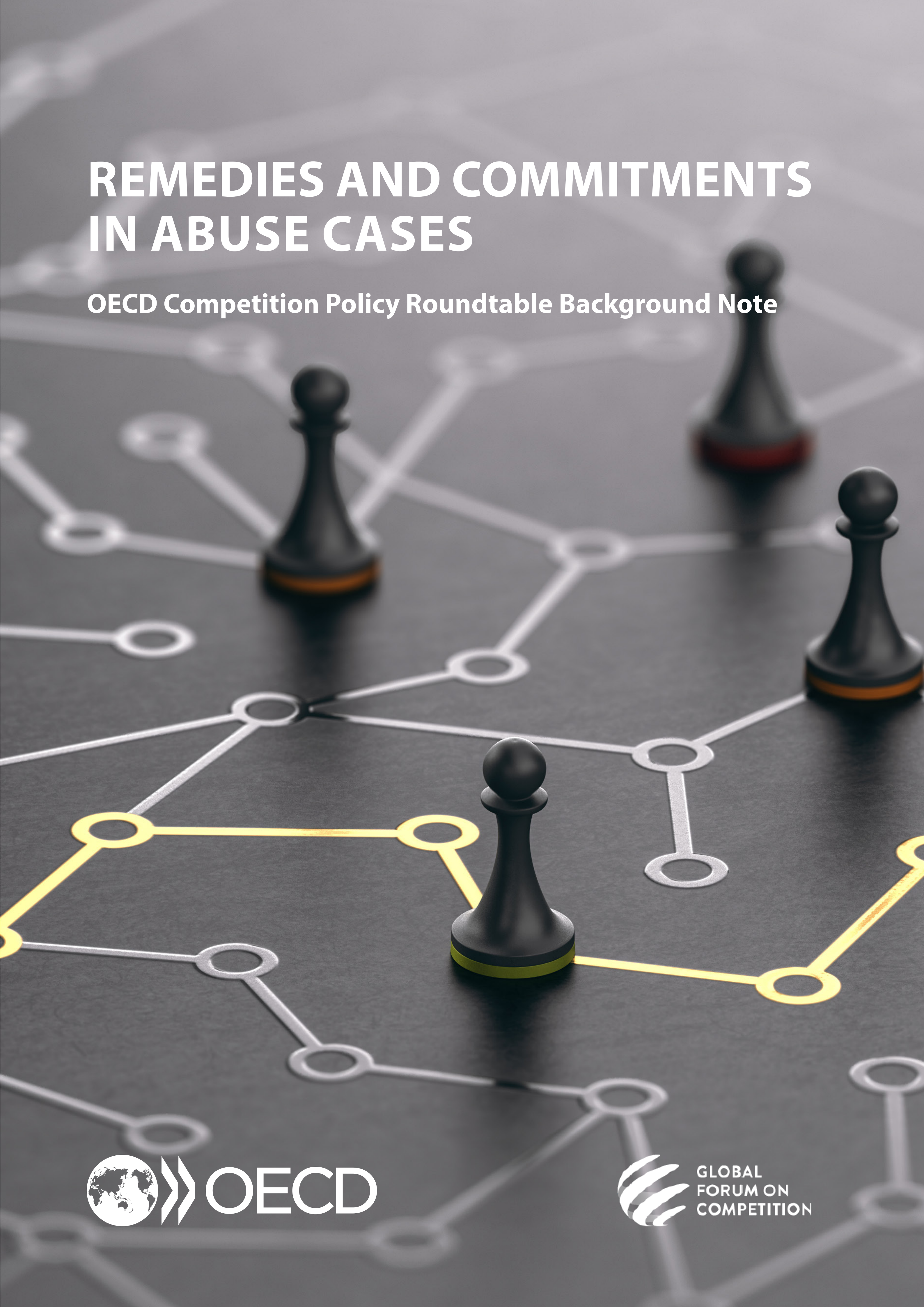

REMEDIES AND COMMITMENTS IN ABUSE CASES

OECD Competition Policy Roundtable Background Note

OECD

GLOBAL FORUM ON COMPETITION

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Foreword

Effective enforcement in abuse cases requires, among others, effective sanctions and/or remedies and commitments. The topic is very timely as competition agencies have focused a great deal of their attention on investigating abuses of dominance in specific sectors, in particular in the pharmaceutical, big tech and energy sectors. Actions taken against big tech companies have sparked an intense debate about the relative efficacy of antitrust remedies. Moreover, there has been an increase in the number of authorities with the powers to accept commitments or impose remedies in abuse of dominance cases. Even though competition agencies worldwide impose each year many remedies in a variety of sectors, the design of remedies that would be adequate, effective, and proportionate remains both highly challenging and disputed.

The complex task of designing and enforcing appropriate remedies or commitments can become even more demanding for young or less experienced competition authorities, which may face additional institutional constraints, such as insufficient financial or human resources, lack of expertise, lack of widespread awareness about and acceptance of the benefits of competition law and policy.

This paper discusses the types of remedies and commitments that can be imposed or accepted. It takes an in-depth look at the rules and principles for deciding whether to resolve the case through remedies or voluntary commitments; the rules and principles for deciding whether to impose or accept behavioural or structural remedies or commitments; the necessity and ways to ensure compliance with remedies and commitments; and the ex-post evaluation of adopted solutions. It concludes with a summary of main takeaways that could guide competition agencies when designing remedies and commitments in abuse of dominance cases.

This note was written by Dr. Anna Renata Pisarkiewicz (Research Fellow, Florence School of Regulation) working as a consultant for the OECD Competition Division. It benefited from comments by Sabine Zigelski, Aura García Pabón, Antonio Capobianco, and Ori Schwartz of the OECD Competition. It was prepared as a background note for discussions on “Remedies and Commitments in Abuse Cases” taking place at the December 2022 session of the Global Forum on Competition, https://www.oecd.org/competition/remedies-and-commitments-in-abuse-cases.htm. The opinions expressed and arguments employed herein are those of the authors and do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

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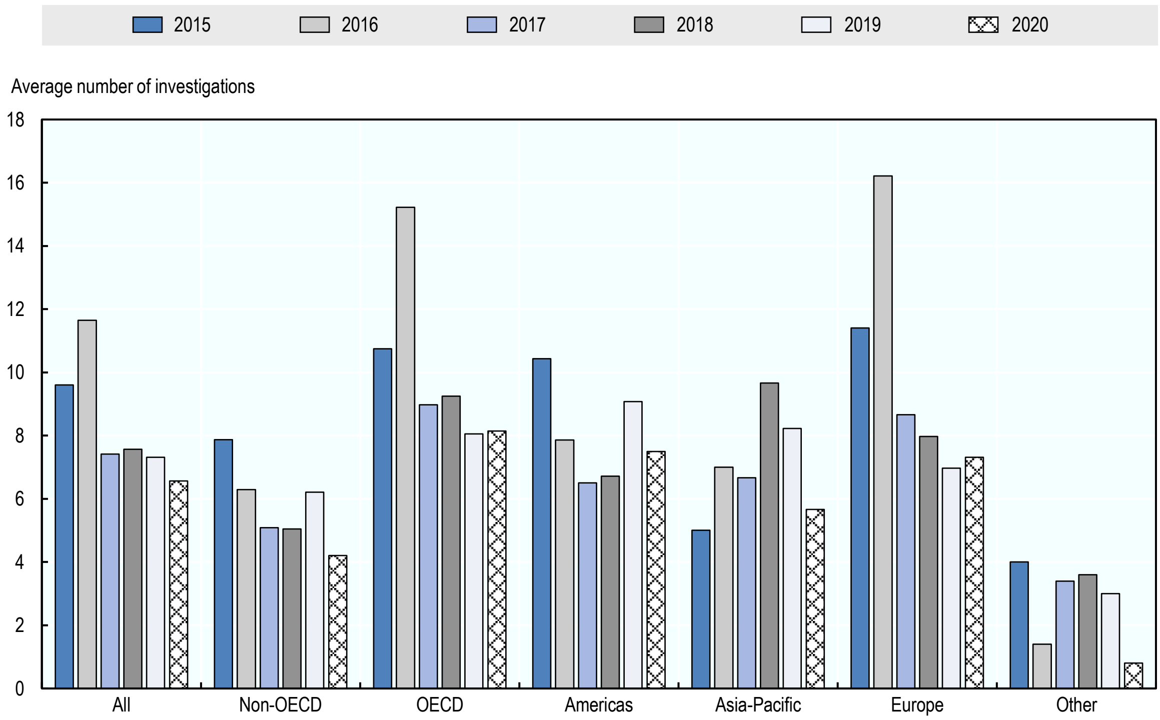
1 Introduction

Abuse of dominance, or monopolisation, continues to be one of the most challenging and debated areas of competition law. Certainly, in comparison to merger transactions, the number of investigated abuses is far more modest. Over the period of 2015 and 2020, this number has either remained stable or declined in most regions across the world. OECD countries have investigated on average eight to nine cases between 2017 and 2020, while non-OECD countries' record has been slightly lower, ranging from four to six in the same period (OECD, 2022[1]). Moreover, in some regions, enforcement regarding unilateral conduct may not only be limited, but also concentrated in a small number of jurisdictions. For example, in 2020, in the Asia-Pacific region, only five out of a sample of 14 jurisdictions that reported information, had at least one abuse of dominance decision (OECD, 2021[2]). However, as several jurisdictions in that region have introduced their first competition law and policy regimes only in recent years while others increased competition enforcement powers, it is expected that the number of investigations regarding unilateral conduct will grow in the coming years (OECD, 2021[2]).

Figure 1. Average number of abuse of dominance investigations launched, 2015-2020



Note: Data based on the 62 jurisdictions in the OECD CompStats database that provided comparable data for all six years.
Source: OECD CompStats database, (OECD, 2022[1])

While enforcement in the area of unilateral conduct is equally important in both developed and emerging economies, it may play a special role in the latter where dominant companies are often former, recently privatised or current state-owned incumbents.

Detecting an abuse of dominance will on its own do little good for competition and consumers if "[e]nsuing remedy or sanction is too lenient, too severe, too late, not administrable, or otherwise poorly conceived or implemented" (OECD, 2006[3]). Already back in 2006 when the OECD held a roundtable on 'Remedies and Sanctions in Abuse of Dominance Cases', it noted that "[t]he subject of remedies and sanctions tends to be neglected in comparison to the attention dedicated to the issues of how to identify the existence of dominance and its abuse". While in comparative terms, the topic of remedies still attracts less attention, more research has been done in recent years, highlighting the complexity of the topic.[1]

1.1. Terminology

Typically, abuse of dominance proceedings can end in two ways.[2] A competition agency can issue a formal prohibition decision confirming the existence of the abuse if it finds sufficient and convincing evidence. In such a case the decision might include a cease-and-desist order, a fine and possibly also various remedies. Second, the agency can accept commitments if an investigated firm proposes them prior to the conclusion of an ongoing investigation. Such an early termination procedure is known under different terms in different jurisdictions: commitment decisions (the EU and its Member States, Singapore), undertakings (Malaysia, 2010[4]), consent agreements (Canada, Nigeria) or consent orders or decrees (the US, Korea, South Africa, or Israel) (OECD, 2016[5]). This Note will refer to early termination decisions involving voluntarily negotiated remedies as 'commitment decisions'.

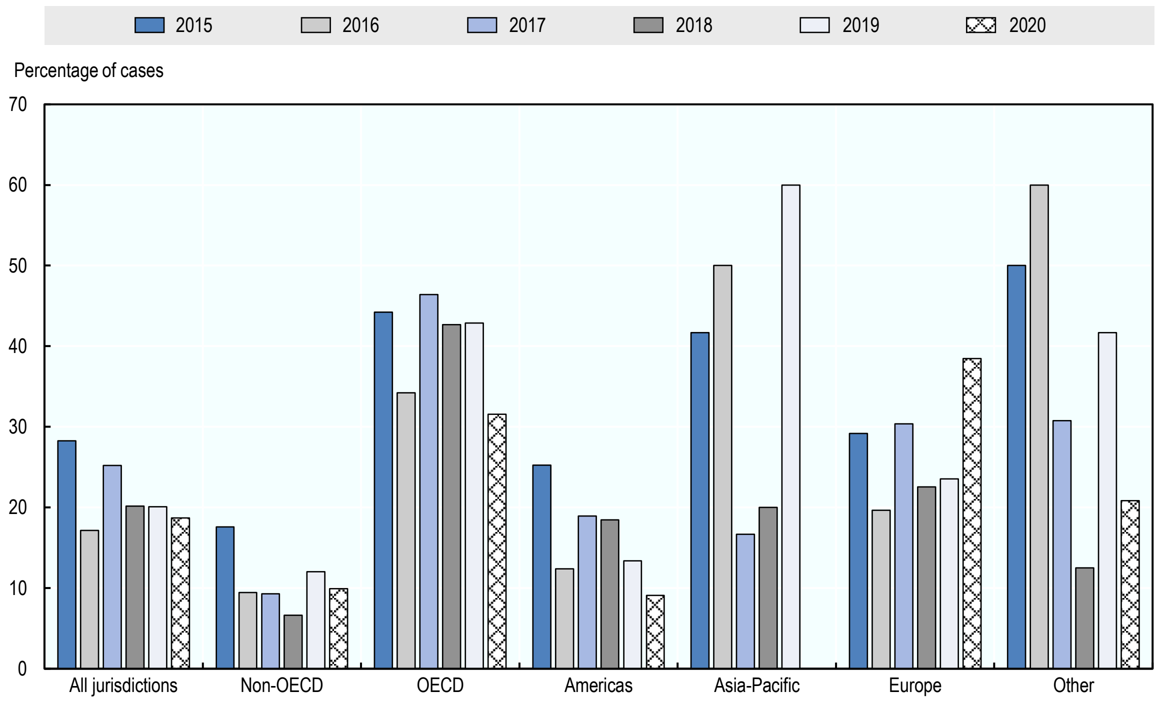
This Note focuses on remedies and commitments, leaving the sanctions beyond its scope, as they were a topic of the 2006 discussion (OECD, 2006[3]). Both remedies and commitments seek to address a specific competitive concern that can arise from the abuse of a dominant position. As in the context of competition policy, the terms 'remedy' and 'commitment' are sometimes used as substitutable, it may be useful to clarify their precise meaning.[3] First, it must be acknowledged that the distinction between these two terms originates from the wording of EU legislation. Commitments and remedies are respectively governed by Articles 9 and 7 of Regulation 1/2003.[4] Commitments are measures that firms offer voluntarily in the course of an ongoing investigation, whereas remedies refer to measures that competition agencies can impose on their own initiative when they consider them to be necessary to bring the infringement to an end, with or without the investigated firm having offered any commitments. In both cases, investigated firms can engage in negotiations with the competition agency in an attempt to shape the final content of the measures. While the principles and procedures governing the imposition of non-negotiated remedies, such as those under Article 7 are different from voluntarily negotiated commitments under Article 9, in practice similar measures can be used under both articles. To our best knowledge, the majority of other jurisdictions does not make such a distinction explicitly. If there is a distinction, it is often rather implicit, and uses a single term, which moreover may be entirely different. For example, in Colombia, although Competition Law of 2009 does not mention the term 'remedy', the Superintendence of Industry and Commerce has nonetheless the power to impose remedies, which is deduced from Article 3 of Decree 4886 of 2011. The latter states that the competition authority has the legal power to order offenders to modify or terminate a conduct that violates the provisions on the protection of competition and unfair competition. In addition, Article 16 of the Competition Law No. 1340 of 2009, which foresees the possibility to offer commitments uses the term 'sufficient guarantees' (*garantías suficientes*). Still, a distinction between remedies and commitments may be useful as it allows to distinguish these two instruments not on the basis of their content, but with regard to different applicable procedures, and potentially also different challenges that such procedures might raise.

1.2. Recent developments

The focus on remedies and commitments is timely due to several developments.

- First, the design and implementation of remedies and commitments continues to be a challenging task, even more so as markets become increasingly complex or increasingly concentrated. The presence of dominant firms with entrenched market power has questioned the effectiveness of behavioural remedies in abuse of dominance cases, which have been typically preferred, calling for the re-evaluation of traditionally sceptical positions towards the use of structural remedies in such cases.
- Second, with the growing number of competition authorities with the power to accept commitments (OECD, 2016[5]), the use of settlements or commitments in abuse of dominance cases has become quite common. Between 2015 and 2020, it affected 21.7% of cases, reaching 40.7% in the OECD countries, and 10.9% in the non-OECD countries (OECD, 2022[1]).

Figure 2. Percentage of abuse of dominance cases with settlements or commitment procedures, 2015-2020



Note: Data based on the 56 jurisdictions in the OECD CompStats database that provided comparable data for all six years for both abuse of dominance decisions and abuse of dominance settlements/commitments.
Source: OECD CompStats database (OECD, 2022[1])

As more jurisdictions use commitments, including those with young competition authorities and recently adopted competition laws, understanding the challenges they raise and when their use is optimal becomes of vital importance. While resolving an abuse case through an early termination negotiated commitment decision can be very appealing, inadequate or excessive reliance on such a procedure can lead to sub-optimal outcomes for markets as well as the legal system. For example, the allegedly excessive use of commitment decisions has been criticised as commitments do not provide the legal and policy guidance that is needed (OECD, 2016[5]), in particular in the rapidly evolving digital economy, in which novel and complex theories of harm emerge.

- Third, competition agencies resort more frequently to demand-side (consumer-facing) remedies, which raise their own set of challenges (OECD, 2018[6]) as their design requires insights not only from traditional industrial organisation theory, but also from behavioural economics, psychology, and data science. This, in turn, demands increased institutional capacity and multi-disciplinary expertise of the competition agencies.
- Fourth, the use remedies and commitments in regulated sectors raises an additional set of issues. First, such sectors are subject to both general competition law and sectoral regulation. The latter tends to revolve around access, which often leads to regulatory disputes and judicial litigation. Hence, there is a risk that related or similar access-focused disputes might be handled separately by competition and regulatory authorities. Whether such proceedings take place simultaneously or not, the authorities might prescribe divergent solutions, given that the objectives each of them pursues differ, thereby jeopardising the effectiveness of the respective decisions and the overall coherence of the legal and economic framework governing a given sector. Also, if strikingly divergent approaches to the use of commitment decisions are adopted across different sectors, some of the sectors might be left with little guidance as to which behaviours would be deemed anticompetitive.[5]
- Finally, the heated academic discussion about the (in)effectiveness of remedies in cases concerning digital platforms[6] has stressed the importance of monitoring and assessing ex post whether adopted remedies actually lead to desired outcomes.[7]

In light of the above, this Background Note will discuss recent developments in the application of remedies and commitments in abuse of dominance cases, summarising the main challenges faced by competition agencies as well as practices developed so far. In doing so, the Note will focus on public enforcement, leaving beyond its scope issues raised by private enforcement. Following this introduction, Section 2 explains conceptual differences between remedies and commitment decisions and discusses the objectives and principles guiding their adoption. Section 3 offers a classification of remedies and reviews recent developments in the agencies' practice. Section 4 focuses on enforcement, monitoring, and compliance. Section 5 concludes.

2 Commitment and prohibition decisions: taxonomy, objectives, and principles

2.1. Taxonomy

Competition agencies typically resolve abuse of dominance cases by adopting a prohibition or a commitment decision; two tools that involve different costs and benefits, have different implications and lead to different outcomes.

Prohibition decisions formally confirm the existence of an abuse, and consequently, they may: (i) include a cease-and-desist order, requiring a given firm to stop the infringement, (ii) impose a fine, and (iii) complement it with remedies: structural, behavioural or both. Commitment decisions, on the other hand, include no finding of an infringement, but put an end to the investigation by imposing as binding commitments that investigated firms have proposed to address the initial concern identified by the agency.

As prohibition decisions confirm the existence of an abuse, they tend to include detailed substantive, often lengthy, analysis of the infringement, which covers both the behaviour itself as well as its actual or potential anti-competitive effects. The length of decisions varies across jurisdictions, which reflects not only different drafting habits, but most likely also of different levels of sophistication of both legal and economic analyses as well as standards of review by the competent courts. The EU experience, for example, reveals that fully-fledged prohibition decisions tend to be longer than commitment decisions.[8] This can be caused, among others, by the fact that the latter may exclude or limit the need for and scope of economic analysis.

Over the last two decades, the number of competition agencies with the powers to adopt commitments has grown significantly. According to (Makris, 2020[7]), 86% of the 130 jurisdictions that have antitrust laws, has the power to adopt commitments. Except for the United States where the first consent decree was adopted by the Department of Justice in 1906, for most jurisdictions it is a relatively novel tool. Israel introduced it in 2000, while the EU acquired a power to accept commitments in 2004 with the entry into force of Regulation 1/2003. More recently, Japan has introduced the commitment procedure under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in December 2018.[9] Turkey has formally added a commitment mechanism in June 2020,[10] while India has introduced in the Parliament the Competition (Amendment) Bill in 2022 that, if adopted, would introduce settlements and commitments for abuse of dominance and vertical agreements cases.[11]

The decision whether to accept commitments or not typically rests within the discretion of the competition agency. However, some jurisdictions specify circumstances in which they exclude the possibility to accept commitments. These include cases in which the very nature of the infringement calls for a fine (the EU), cases concerning serious abuses of dominance (France, the UK), recidivism (Japan),[12] or when it would be either difficult to ascertain compliance with and the effectiveness of the commitments or where commitments could undermine deterrence (the UK) (UK CMA, 2021[8]).

Box 1. Common features of commitment procedures

Despite some divergence, commitment procedures available across the world share several common features. Typically, before a competition agency accepts as binding commitments offered by a firm, it must follow the following procedural steps:

- Commitments can be proposed and accepted if there is a pending antitrust investigation, or if the agency has done an initial/preliminary assessment which has uncovered potential competition concerns. Such concerns must be communicated to the parties involved so that they can decide as to whether to initiate commitment negotiations.
- The decision to submit commitments in response to concerns raised by an agency is a voluntary one by the company. Agencies cannot require companies under investigation to engage in commitment discussions.
- Once commitments are submitted, the agency proceeds to a 'market test' or to the publication of a summary of the case and of the commitments so that interested third parties can submit observations within a fixed time limit. Based on the results of the market test, further discussions with the parties can take place with a view to amend eventually the commitments initially proposed.
- Once the agency is satisfied that the commitments offered adequately address its competition concerns, it adopts a formal decision which renders the commitment binding and eliminates the grounds for continuing any enforcement action. Most agencies make commitment decisions public.
- It is up to the agency to monitor compliance with the commitments. In case of non-compliance the agency can reopen the investigation and/or impose fines; most agencies (but not all) can also impose a separate sanction on the company for the breach of the binding commitments.

Source: (OECD, 2016[5])

The empirical evidence on the benefits of adopting commitment decisions instead of fully-fledged prohibition decisions is to date either missing or very fragmented. Still, the increasing use of such decisions by competition agencies suggests that benefits might offset the costs and potential risks (OECD, 2016[5]).

The proliferation and popularity of the commitment procedure seems to be mainly driven by alleged procedural efficiencies, the use of fewer resources and other potential benefits that it entails primarily for the competition agencies and investigated firms.

As for the use of resources, if a competition agency finds proposed commitments adequate to resolve identified concerns, a fully-fledged investigation becomes unnecessary, which allows the authority to employ the resources elsewhere. However, the argument that commitment decisions save agencies and firms' resources by requiring less time is not necessarily confirmed in practice. According to (Gerard, 2014[9]) and (Mariniello, 2014[10]) commitment decisions in the EU take on average 15% longer than infringement decisions. However, even if the average length of commitment and prohibition decisions were the same, another advantage that commitments offer is that they are less likely to be challenged in court.[13]

If commitment decisions are not as swift as initially expected, their suitability to resolve harmful practices in rapidly evolving digital markets can also be questioned. For example, the UK House of Lords' already back in 2016 pointed to the length of commitment negotiations and the technical complexity of the remedies as a potential obstacle to their use within the digital markets (UK House of Lords, 2016[11]).

Perhaps the most appealing feature of commitments for businesses is that, if accepted, they might allow the companies to avoid fines, which over the years have become increasingly hefty.[14] However, this option is not always available. For example, in Australia and the EU the use of commitment decisions in precluded in cases where the competition agencies intend to impose a fine (2106b). In jurisdictions where competition agencies can impose a fine in addition to accepting commitments proposed by the investigated firm, incentives to offer such commitments may be diminished or may be primarily driven by other considerations. For example, as commitment decisions do not include a formal finding of infringement, they reduce the risk of private civil follow-on actions and consequential damages. Also, if a company chose to engage in the same abusive conduct in the future as the one which has been addressed through a commitment decision, it would not be considered as a recidivist, which typically counts as an aggravating factor in the calculation of fines.

In jurisdictions that foresee different procedures and conditions for remedies and commitment decisions the question arises whether the competition agency should be unrestrained in switching from one procedure to the other, and if yes, what impact it may have on legal certainty and attractiveness of spontaneously offered commitments. As competition agencies enjoy wide discretion in deciding whether to accept or reject proposed commitments, even a lengthy co-operation, such as the one that took place in *Google Search (Shopping),*[15] may fail.

If procedures that govern the imposition of remedies and commitments differ and produce different consequences, it might be advisable to have in place rules or guidelines that would clarify conditions under which the competition authority can revert from one procedure to the other. Such rules should not be overly prescriptive. Rather they should balance the need to ensure flexibility and a minimum degree of legal predictability. For example, if a competition authority decides to submit proposed commitments to market testing, assuming that they could suffice to address a previously identified competition issue, but eventually chooses not to accept them, it would seem sensible to require the authority to explain why it has decided to reject them. Also, while it is important to ensure that dominant firms do not abuse the commitment procedure to escape formal prohibition decisions, competition authorities could consider such firms' efforts to co-operate as an attenuating circumstance in the calculation of the fine, should the agency choose to impose one.

While the use of the commitment procedure has the potential to produce several benefits, inadequate or excessive reliance on that procedure can also have negative effects. First, commitments may lead to sub-optimal outcomes if they are accepted in cases where guidance is needed (Geradin and Mattiolli, 2017[12]). Guidance may be needed in cases that involve complex and novel questions of competition law or in jurisdictions with young competition agencies or where competition law has been adopted only recently and all the relevant actors (firms, competition authority, and the courts) need to learn. For example, the OECD Peer Review of Competition Law and Policy in Brazil (OECD, 2019[13]) found that in Brazil "settlements are not reviewed by the courts and there is no infringement decision in non-cartel settlements, making their value as legal precedents much weaker. This reduced legal certainty and can slow the development of competition law. In addition, the absence of a finding of infringement in non-cartel cases can have negative effects on follow-on private damages actions. There also appear to be different settlement conditions across cases depending on which Reporting Commission is leading the negotiation, which creates uncertainty in the process and outcome".

The claim that a commitment procedure rarely leads to appeals, potentially hampering the evolution of the jurisprudence is a very important one. Setting legal precedents is fundamental for the process of judicial learning and decision-making, and as such it should be viewed as an investment to increase the stock of knowledge useful for the assessment of future cases (Landes and Posner, 1976[14]). The process of judicial learning is an expression of the educational function of law, i.e. dissemination to all actors on the market of information about what kind of conduct violates competition law and how it can be cured. In that regard, it must be noted that remedies, which are included in prohibitions decisions, serve such a goal much better than commitments. Not only the latter do not have the precedential value, but they also reduce opportunities for litigation and adjudication which are essential for learning.

(Mariniello, 2014[10]) points out that competition authorities might have a greater incentive to opt for a commitment decision precisely in cases that would benefit from more legal guidance that a prohibition decision would typically provide. This is because cases involving novel and complex theories of harm are more at risk of being annulled by the courts. The risk of annulment by the courts is likely to vary across jurisdictions based on the level of familiarity and expertise that national courts have with the enforcement of competition laws.

Another concern about the use of commitment decisions is that competition agencies might prefer them when proving the existence of a particular form of abuse is particularly challenging due to substantive legal hurdles laid down in previous agency's or court's decisions. According to (Stones, 2019[15]), this may be the case with abuses involving collective dominance, excessive prices or refusal to deal. If proving some forms of violations is indeed more burdensome, there is a risk that when facing heightened legal hurdles competition authorities might accept insufficient remedies. This, in turn, could send a wrong signal to the market and undermine agencies' position in cases where they manage to build a solid case, thereby undermining the overall effectiveness of competition enforcement.

Considering different trade-offs between commitments and prohibition decisions, the question arises about their optimal use. (Choné, Souam and Vialfont, 2014[16]) find that the availability of commitments (i) reduces deterrence as firms expect a lower probability of an infringement decision, and thus also a lower fine, and (ii) defeats it completely if a competition agency uses it for all detected cases.

(Cosnita-Langlais and Tropeano, 2022[17]) evaluate the impact of commitment decisions on the efficiency of enforcement by focusing on the intertemporal role of the litigation procedure. They find that if the level of fines is high enough to achieve meaningful deterrence, the use of commitments is not optimal. This is because a competition authority might undervalue both static and dynamic benefits of litigation and opt for commitment decisions too often. According to the authors, the availability of the commitment procedure might have a self-reinforcing effect over time as the agency's preference for commitments results in a stronger bias at the present period when the agency has to decide whether to accept commitments or engage in a fully-fledged investigation. In that regard it is worth recalling observations submitted by Douglas H. Ginsburg and Joshua D. Wright to the OECD on the culture of consent in antitrust settlements: "*The culture of an agency is inevitably affected by the tasks it predominantly performs. For an antitrust agency that settles the great majority of the cases it brings, most staff time is devoted to investigation. Whether a matter is destined for litigation or for settlement, the necessary investigative skills are the same, but it may become apparent, whether at the outset or during an investigation, the agency's case is sufficiently strong, or the defendant's resources sufficiently limited, that settlement is a virtual certainty. A more thorough investigation of the sort needed in anticipation of litigation can be substantially truncated in such a case. Indeed, insofar as the agency is able to find easy cases, that is, cases almost certain to be settled, it will neither need nor acquire nor cultivate more sophisticated forensic skills. In short, a degree of laxity if not sloppiness may come to infect an agency's investigations that are heading inevitably toward resolution by consent*" (OECD, 2016[18]).

2.2. Principles: effectiveness and proportionality

The principles governing the imposition of remedies might vary across the world. However, most commonly it is required that remedies be effective and proportionate.

2.2.1. Effectiveness

The concept of infringement refers both to a harmful behaviour and its distortive effects. Thus, to be effective a remedy must put an end to both.[16] This means that if a conduct itself has ceased, but its harmful effects continue, competition agencies must act and compel firms to take necessary steps to remedy the effects. In that sense, the effective nature of the remedy must last in the long run.

Effectiveness, which refers to a remedy's ability to bring an infringement to an end and to restore competitive conditions in the market, can be expressed in various terms and assessed in reference to various parameters. Botswana's Monopolisation and Abuse of Dominance Guidelines (Botswana Competition and Consumer Authority, 2013[19]) state that remedies should be "*feasible, implementable, effective and proportional to the violation […] and overall […] must be self-regulatory, i.e. be transparent, checked and accounted for by all the market participants*". The UK CMA (UK CMA, 2018[20]) in assessing effectiveness of proposed remedies considers, among others:

1. *appropriate timing and duration* (preferring remedies that produce effects quickly over those that would have an effect only in the long terms or where timing of the effect would be uncertain);
2. *practicality,* i.e. if they can be effectively implemented, monitored and enforced (for example, intrusive monitoring or elaborate compliance programmes would reduce the practicality of a remedy);
3. *risk profile,* i.e. whether a remedy offers a high degree of certainty of achieving the intended effect.

While different words can be used, such as 'feasible', 'implementable' or 'practical', in most cases they all fall under the notion of effectiveness. Afterall, a remedy that is neither feasible nor implementable or practical could never bring an infringement to an end.

It seems quite clear that while the notion of effectiveness revolves primarily around a remedy's ability to put an end to the infringement, and hence the causal link between the infringement and the cure, it also includes parameters that concern the ability of the competition agency to implement it, as shown by the notion of practicality above. Indeed, some authorities may explicitly consider costs involved in the administration of a specific remedy. For example, para 6.7 of Botswana's Monopolisation and Abuse of Dominance Guidelines (Botswana Competition and Consumer Authority, 2013[19]) states that 'behavioural remedies should involve oversight and monitoring costs and risks that are manageable and *affordable* for the Competition Authority' (emphasis added).

The nature of the remedy sought in antitrust cases may provide important clues about the soundness of the antitrust claim.[17] Thinking whether there is an appropriate, implementable, administrable, in other words, an effective remedy is an exercise in which competition agencies should engage before they decide to commit limited public resources to pursue a given case (Kovacic, 1999[21]). If, for whatever reason, there is no practical remedy, the agency may adopt a prohibition decision and impose a fine or allocate its resources to other equally or more egregious violations of competition law. For example, the difficulty of administering an adequate remedy was one of the key reasons in the US Supreme Court's ruling in *Trinko* in which the Court had found no violation of Section 2 Sherman Act. Citing Professor Areeda, the Court stated: "*No court should impose a duty to deal that it cannot explain or inadequately and reasonably supervise. The problem should be deemed irremedia[ble] by antitrust law when compulsory access requires the court to assume the day-to-day controls characteristics of a regulatory agency*".[18] This means that some harmful conducts might fall beyond the limits of effective remedial antitrust control. In such cases ex-ante regulation might be warranted.

2.2.2. Proportionality

The OECD Recommendation on Transparency and Procedural Fairness in Competition Law Enforcement (OECD, 2021[22]) stresses in point II.3 the need to ensure that competition law enforcement in general is non-discriminatory, proportionate and consistent across similar cases. In most jurisdictions, proportionality is a core principle of law, which means that even if it is not expressly mentioned in the text of the competition law, it is nonetheless applicable. For example, in the United States proportionality has played a role in the evolution of case law ((Sullivan, 2003[23])), despite the lack of formal recognition of this principle (OECD, 2019[24]).

A proportional remedy is one that addresses the identified competition concern, without going beyond what is necessary to remedy it. This implies that in abuse cases proportional remedies should restore, as much as possible, the competitive situation that existed before the abuse occurred, without seeking to improve the market structure that existed prior to the abuse.

The notion of proportionality should be viewed as determining not only the nature of the remedy (whether structural or behavioural, and if behavioural of what sort), but also its duration. As the decisional practice of competition authorities shows, duration may vary. In most of its decisions, the EU Commission made commitments binding for a period of 5 years, occasionally deciding that a longer period of 7 or 10 years was more appropriate.[19]

The length of the application of remedies should balance potentially opposing effects: it should be long enough to allow intended effects to materialise and short enough to account for the dynamic nature of markets. For example, in prescribing a 5-year period, in the *Microsoft* decision, the Commission took the view that such period was "adapted to a fast-evolving industry, where the functionality and use of the products may significantly change within short time frames", but at the same time it was "long enough to remedy [the] abuse, and to present most Windows users with a choice of web browsers, considering that many users were not sufficiently informed about web browsers" nor that competing browsers could be downloaded (para. 112 of the decision).[20]

As markets evolve, remedies may become ineffective due to altered market conditions. This is particularly relevant in the context of rapidly evolving digital and other innovation-intensive markets. Thus, competition agencies should have the discretion to modify remedies as well as their application period by either extending it or prescribing an early cessation. Competition agencies might also include sunset clauses in the decisions whereby the remedies would expire if certain market conditions occurred. An early termination ensures not only that the remedy remains proportionate, as it ceases to apply when it is no longer necessary, but it also releases the agency from monitoring, thereby ensuring that its resources are not employed where they are no longer needed.

Box 2. Proportionality: modification and early termination of commitments

The power to modify and replace commitments is foreseen in various laws. In the **US**, both the FTC and DoJ have procedures concerning the modification of consent decrees. According to the FTC's statute and implementing rules, any party subject to the consent order may seek its modification if the underlying facts or law have changed, rendering the order inequitable or otherwise unnecessary. In contrast, DoJ's decrees are court orders, which means that the Division cannot modify them, and so the affected firms must ask the court to modify or revoke them.

In **Singapore**, Section 60A(5) and (6) of the Competition Act 2004 foresee that the Competition Commission "may, at any time when a commitment is in force, accept a variation of the commitment; or another commitment in substitution" and that "a commitment may be released by the Commission [if it] is no longer necessary or appropriate". In **Korea**, the FTC may cancel a consent order pursuant to Article 51(4) of the Monopoly Regulation and Fair Trade Act when remedy becomes inappropriate due to significant changes of facts on which the consent order relied.

In the **UK**, the (CMA, 2015[25]) follows its Guidance on the CMA's approach to the variation and termination of merger, monopoly and market undertakings and orders. In particular, the CMA, upon request from a party or at its own initiative, considers whether imposed orders or undertakings are no longer appropriate and need to be varied, superseded, or revoked. In doing so, it may take into account various circumstances, such as:

- Time expiration or undertakings clearly becoming obsolete;
- Changes resulting from the adoption new legislation;
- Changes in market conditions.

In the **EU**, Article 9(2) of Regulation 1/2003 specifies that the European Commission may, upon request or on its own initiative, reopen the proceedings where, among others, there has been a material change in any of the facts on which the decision was based. For example, in Deutsche Bahn I and II,[*] the European Commission has expressly foreseen that the accepted commitments could cease prematurely if, for the period of a calendar year, at least 25% of the combined demand of Traction Current of all railway undertakings in Germany was purchased from independent Third Party Supplier(s). When the Monitoring Trustee received written and reasoned submissions from DB Energie showing that the market share of alternative suppliers for external customers had exceeded 50%, it verified the accuracy of the submission and consequently recommended to the European Commission the early termination of the commitments. The commitments which were made binding for five years and were to expire on 30 June 2019 ultimately had ceased on 8 April 2016; hence slightly more than three years ahead of the established date.

Note: * Commission Decision (2013), Case COMP/AT.39678/Deutsche Bahn I and Case COMP/AT.39731/Deutsche Bahn II

The requirement of proportionality can have different dimensions in the context of non-negotiated remedies imposed in prohibition decisions and voluntarily proposed commitments. The EU Commission Notice on best practices for the conduct of proceedings concerning Articles 101 and 102 TFEU confirms this difference in para. 115, which explicitly acknowledges that the European Commission "*is not obliged to compare such voluntary commitments with measures it could impose under Article 7 of Regulation 1/2003 and to regard as disproportionate any commitments which go beyond such measures*".[21] This issue has been also discussed by the CJEU in *Alrosa*,[22] and most recently in the *PGNG* judgment.[23]

Box 3. Proportionality of remedies and commitments

In January 2019, a Polish oil and gas company (PGNG) brought an action before the EU General Court, seeking the annulment of the Commission decision accepting commitments submitted by Gazprom under Article 9 of Regulation 1/2003. The case concerned the alleged abuse of a dominant position by Gazprom in Central and Eastern European (CEE) markets for the wholesale supply of gas (Case AT.39816 – Upstream Gas Suppliers in Central and Eastern Europe). According to PGNG, the Commission had breached the principle of proportionality by accepting incomplete and insufficient commitments. The Court reminded that proportionality is a general principle of EU law. It then held that although in contrast to Article 7 of Regulation 1/2003, Article 9 does not expressly require it, proportionality nonetheless applies, albeit to a different extent. In particular, as previously already stated by the Court of Justice in Alrosa, in the context of Article 9, the principle of proportionality requires the Commission to verify that the proposed commitments address the concerns it expressed to the concerned firm and that the firm has not offered other less onerous commitments that would also address those concerns satisfactorily.

The Alrosa judgment illustrates how wide discretion of a competition agency in deciding which commitments to accept, may effectively leave them beyond courts' supervision. Paucity of precedents in the EU on commitments decisions is, in fact, caused by the fact that firms proposing commitments do not have incentives to appeal, while third parties that may have such incentives face serious limitations in the aftermath of the Alrosa judgment.

Sources:
(Jenny, 2015, pp. 701-770[26]), (Schweitzer, 2012[27]).

3 Types of remedies

Measures that competition agencies can impose in the form of remedies or commitments are typically divided into structural and behavioural. As each type presents its own set of advantages and disadvantages, debate on which one should be used and when continuous. This debate is further fuelled by unsettled claims about the increasing concentration levels across the whole economy, concerns about underenforcement, and a growing number of actions against digital platforms, in which the effectiveness of remedies used or foreseen is being questioned.

3.1. Structural remedies

Structural remedies require firms to divest, release or carve-out certain tangible or intangible assets they own. They have several important advantages. By removing the very source of a dominant firm's ability and incentive to engage in an anticompetitive conduct, they help to eliminate, or at least decrease the dominant firm's market power and create conditions favourable to entry and competition.[24] They are also relatively simple to devise and implement as due to their one-off nature they do not typically require extensive, time- and resource-consuming monitoring, so typical of behavioural remedies. Moreover, they are difficult for companies to circumvent and avoid.

Despite all the advantages mentioned above, structural remedies are not without challenges. As divestitures disrupt a firm's business model, there is a risk that they can create inefficiencies. This could, for example, materialise, if a company would lose economies of scale or scope, its incentive to innovate (OECD, 2006[3]) or costly and time-consuming investment would need to be duplicated. Structural remedies might also be unworkable if post-separation the newly created units become unviable or if suitable purchasers do not exist.

Because of their intrusive and often irreversible nature, some jurisdictions expressly state that structural remedies should only be prescribed where the source of competitive harm is inexorably linked to a company's structure. This is explicitly recognised in the EU in recital 12 of Regulation 1/2003, which states: "*Changes to the structure of an undertaking as it existed before the infringement was committed would only be proportionate where there is a substantial risk of a lasting or repeated infringement that derives from the very structure of the undertaking*". Moreover, both recital 12 and Article 7 of the Regulation prescribe that structural remedies can only be imposed "*where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy*". A similar approach has been adopted also in South Africa, where section 58 of the Competition Act empowers the Competition Tribunal to order divestitures in abuse of dominance cases in compliance with section 60 of the Act. The latter provides that a divestiture can be imposed if the abusive conduct cannot be effectively remedied under any other provision of the Act or if it constitutes recidivism. Hence, both the EU and South Africa consider divestitures in abuse of dominance cases as a remedy of last resort.

In certain circumstances, structural remedies may also be costly, difficult to administer, and lengthy, as was the case with AT&T, which involved a decade-long judicial oversight (OECD, 2022[1]). However, (Kwoka and Valletti, 2021[28]) argue that it would be incorrect to assess a specific option based on whether it is costly and that instead the benchmark should be whether it is superior to the real-world alternatives. While the cost of implementation and monitoring should not be the primary benchmark, it is a valid concern for agencies, in particular those that face significant budget constraints.

In addition to difficulties mentioned above, structural remedies are also intrinsically at risk of being disproportionate as they modify firms' property rights, which often have constitutional value.[25] However, a structural remedy, which should be imposed only where harm to competition derives from the very structure of the firm may be proportionate in cases involving vertical integration, which is the source of dominant firms' ability and incentives to foreclose its rivals through a variety of discriminatory practices.

The experience with divestitures in merger control and in regulated sectors across the world, demonstrate that the decision to impose a structural remedy is not a simple one (OECD, 2022[1]; 2019[13]). The pros and cons of separation depend on parameters that can differ greatly between sectors, markets, and companies. According to (Kwoka and Valletti, 2021[28]) such differences can, among others, depend on whether the separation involves (i) a company's core business or a related operation, and (ii) whether the divested part has been acquired or developed internally. Both distinctions can help identify the line along which the separation could be implemented.[26]

Despite scepticism towards the use of structural remedies in abuse of dominance cases, their mere availability can help produce a deterrent or compliance effect, as shown by the EU decision in *Telekomunikacja Polska* case.[27]

Box 4. Deterrent effect of structural remedies

In 2011, the European Commission held that Telekomunikacja Polska (TP), the Polish telecom incumbent operator, abused its dominant position by refusing to provide access to its infrastructure to alternative operators. In accordance with the Reference Offer and the Polish Telecommunications Law, TP should have concluded contracts within 90 days from the receipt of a valid request from a competitor. Instead, the company had engaged in a variety of dilatory tactics. The Commission launched antitrust proceedings as due to TP's disregard of regulatory obligations, the Polish telecom regulator, UKE, was not capable of enforcing a change in TP's anticompetitive behaviour. Few months after the launch of EU antitrust proceedings, TP had signed an agreement with UKE, proposing a voluntary model of separation based on the equivalence of access (The Charter of Equivalence) to avoid vertical separation that UKE was contemplating since 2007.

While in this example the threat of structural separation came from the sectoral regulator, it nonetheless shows how powerful its effect can be. Despite various sanctions imposed by UKE, long lasting appeals, court proceedings against regulatory decisions, and the launch of EU antitrust proceedings, in the end it was the threat of mandatory separation that had compelled TP to comply with regulatory obligations and to grant access to its infrastructure, an issue that was at the heart of the EU antitrust proceedings. Another aspect worth stressing is that UKE intended to impose vertical separation, as behavioural obligations it previously imposed had turned out to be ineffective and impotent.

Source: (Pisarkiewicz, 2018[29]).

Considering that despite various pitfalls, structural remedies offer important benefits, it might be useful to draw insights about the divestiture process from relevant past examples (OECD, 2022[30]), which can be easily found across the world in regulated network industries, such as telecommunications, electricity, railways, and banking (OECD, 2019[13]; OECD, 2016[5]; OECD, 2011[31]; Khan, 2019[32]), where divestitures have been implemented with less reluctance, and purportedly without prohibitive costs (Kwoka and Valletti, 2021[28]). Despite some differences, most sectors involve the presence of a vertically integrated incumbent operator that provides an essential wholesale input to its customers with whom it competes downstream. It is precisely the vertical integration of the incumbent operators and the essential nature of their inputs that lay at the origin of most competition problems in the network industries. This also explains why efforts to stimulate competition in these sectors have revolved around the introduction of some form of separation.[28]

It is worth noting that in regulated sectors, where structural separation has once been primarily a regulator's tool, it has been attracting attention of operators facing increasing financial pressure. In fact, over time voluntary separations have become a global trend in the telecom sector as in recent years many international telecom groups decided to divest some of their assets, which has led to the emergence of tower companies.[29] Examples of past voluntary separations from regulated and unregulated sector can offer useful insights about the design, implementation, and costs of divestiture. Areas that might require particular attention include delineation of assets and activities to be divested, organisation and process redesign, commercial contracts, separation of data, IT and accounting systems (McKinsey, 2020[33]). Key Performance Indicators (KPI) that firms use to monitor their business on an ongoing basis might come helpful in identifying divestment options. Finally, the success of the divestiture will depend on teaming (support of different teams) and the timing of its implementation (McKinsey, 2020[33]; Khan, 2019[32]).

In view of all the pros and cons, it is not surprising that academic debate about the value and effects of structural remedies is far from settled. Also, structural remedies in abuse of dominance cases are not as widely available as in merger control, and even when they are, they are used sporadically and with extreme caution (OECD, 2019[24]). Indeed, in many jurisdictions there seems to prevail a preference for structural remedies in merger cases, and for behavioural remedies in abuse of dominance cases. For example, the US DoJ Merger Remedies Manual (US DoJ, 2020[34]) explicitly acknowledges that behavioural remedies are appropriate only in very narrow circumstances in merger cases. This is because they are difficult to craft and enforce, and because they essentially regulate the merged entity by substituting central decision making for the free market, which should be avoided. Also, the CMA (UK) acknowledges that 'the circumstances in which behavioural remedies are the right outcome of merger control are rare' (UK CMA, 2019[35]). Preference for structural remedies in merger cases is also very clear in the EU, where over 80 percent of conditional merger clearances involved a structural remedy, while behavioural remedies featured rarely (Maier-Rigaud and Loertscher, 2020[36]).

3.2. Behavioural remedies

In contrast to structural remedies, which seek to restore competition by requiring changes in the structure of the dominant firm's business, behavioural or conduct remedies alter how a dominant firm conducts its operations. Depending on whether the implementation of behavioural remedies involves third parties, such as other market participants, or not, behavioural remedies can be broadly divided into internal and external (GCR, 2021[37]). The former does not involve third parties and relate to firm's internal management and organisation. For example, a dominant firm might be required to introduce a compliance programme or change its corporate governance provisions. The latter, on the other hand, concern a firm's interaction with third parties, and may require the dominant firm, for example, to modify or terminate its existing contracts or alter its pricing schemes. There are also behavioural remedies that concern firm's internal operations, but are prone to affect third parties, or the market in general. A pre-installation of a dominant firm's own software might be a case in point.

Behavioural or conduct remedies can be positive/declaratory or negative/prohibitor, depending on whether they require a company to do or to stop doing something, or both. Negative remedies, which typically take the form of a cease-and-desist order simply require the defendant to stop the abusive behaviour. Positive remedies tend to reflect the abusive behaviour. For example, a remedy to a refusal to supply would be a duty to supply. The countermeasure to anti-competitive self-preferencing would be an obligation not to discriminate. Of course, the distinction between positive and negative remedies can be seen as purely semantic as any prohibition can be easily translated into a positive obligation, i.e. a prohibition not to engage in abusive tying corresponds to a positive obligation to untie jointly sold produces or services. Moreover, negative and positive remedies can be applied jointly, i.e. a negative cease-and-desist order might be complemented by a set of positive remedies that prescribe a specific behaviour.

As behavioural remedies are tailor made, allowing competition agencies to shape them according to the needs of a specific case, they can come in my forms. Examples of behavioural remedies that have been imposed in past abuse of dominance decisions include obligations to:

- Modify or terminate existing contracts (these might include, for example, extension of the notice period to inform about intention to discontinue commercialisation[30] or amendment of license conditions[31]);
- Eliminate exclusivity provisions;[32]
- Introduce and comply with new pricing schemes or conditions;[33]
- Enable customers' or consumers' switching;[34]
- Adopt compliance programmes or set up trainings in competition law;[35]
- Amend corporate governance provisions.[36]

While a competition authority might choose to impose just one behavioural remedy, in practice often a set of complementary remedies is imposed on dominant firms. Moreover, behavioural remedies can complement structural remedies with a view to ensuring the effective implementation of the latter.

In abuse of dominance cases, behavioural remedies feature more frequently than structural remedies. Yet, despite their more frequent use, their effectiveness is often questioned. This is because in contrast to structural remedies, behavioural remedies do not remove a firm's ability and incentive to engage in abusive conduct, which means that they do not directly address the underlying problem of firm's market power (OECD, 2006[3]). Moreover, investigated firms might offer insufficient behavioural remedies simply to decrease the risk that the competition agency would close the investigation with a fine or more severe remedies than those offered by the firm. When offering such remedies, firms might seek to exploit their informational, technological, and financial advantages over a competition authority hoping that they would allow them to secure remedies that would be sub-optimal for the market, but optimal for them. In the end, spontaneously offered remedies, if accepted, often allow firms to avoid fines, negative publicity, and potentially harsher remedies.

Another limitation of behavioural remedies is that they often force firms to act against their own interest. The promotion of competition is usually not aligned with firms' goals to maximise profits. This creates incentives for firms to circumvent or otherwise undermine the effectiveness of a behavioural remedy. Hence, to increase the probability that remedies will restore competition in markets affected by an abuse of dominant position, a more comprehensive approach might be warranted, i.e. one where competition authorities would consider a remedy package that intelligently combines structural and behavioural remedies, and that addresses competition issues on both the supply and the demand-side.

3.3. Demand-side remedies and behavioural economics

While competition authorities often focus their interventions on the supply-side of markets, they can also address competition issues on the demand-side. Indeed, consumers benefit from low prices, high quality, innovative products and services only if both the demand- and supply-sides of the market work effectively. Competition policy, which is "about making markets work well for consumers […] will only […] be effective it if allows for the behaviour of real markets with real consumers and real firms" (Fletcher, 2019[38]). As behavioural economics explains how and why the behaviour of real consumers departs from the rational behaviour described in standard microeconomic models, competition authorities should, and some already do, use insights from behavioural economics to complement their competition analysis and remedy design based on the traditional industrial organisation theory. Such insights can enhance their understanding of a given behaviour's anticompetitive effects, leading to novel theories of harm or the adaptation of the existing ones. They can also help craft more effective consumer-facing remedies. To be effective, such remedies must address heuristics, cognitive biases and information asymmetries. Heuristics, or 'rules of thumb' are cognitive shortcuts that simplify the decisions making process and help explain the dissonance between consumers' expressed preferences and their actual choices. Some biases may be better supported by evidence than others, but the number of empirical studies concerning the impact of various types of biases is continuously growing.[37]

Box 5. Examples of behavioural biases

This is a non-exhaustive list of behavioural biases, which consumers can exhibit simultaneously or independently:

- Present bias: a strong tendency to favour options with payoffs occurring in the present rather than in the future.
- Reference dependence and loss aversion: a preference not to assess outcomes in their own right but rather as gains and losses relative to a reference point, often underestimating gains and overestimating losses.
- Anchoring effects: the disproportionate influence on consumers of reference prices or quantities.
- Framing effects: the impact on choice of presenting competitive offerings in different formats or referring to different contextual information. This means that equivalent offers can be considered as more or less attractive depending on which parameter/feature is made more evident.
- Overconfidence bias: the tendency to overestimate one's own abilities and knowledge, which leads consumers to take riskier decisions than they would otherwise take.
- Saliency bias: the tendency to decide based on what is most obvious or prominent.
- Status quo or default bias: a preference to maintain one's current state of affair and avoid taking any action that would lead to change.

Sources: (OECD, 2018[6]); (Fletcher, 2019[38]).

Demand-side remedies that seek to incorporate behavioural biases can pursue different objectives. For example, (OECD, 2018[6]) and (Fletcher, 2016[39]) distinguish four broad categories of such remedies:

- Disclosure remedies: seek to support effective competition by ensuring that consumers have access to information needed to compare products/services and make informed decisions.
- Shopping around remedies: enhance comparison.
- Switching remedies: aim to facilitate switching by making it less costly and easier.
- Outcome control remedies: specify more detailed rules for suppliers in situations where demand-side remedies work only to the benefit of some groups, potentially creating costs for others.

However, the mere understanding of behavioural biases that are at play and identification of the intended change in consumers' behaviour is in itself insufficient. Designing a remedy that would actually succeed in producing a long-lasting change in consumers' behaviour is not as straightforward as it may seem. For example, status quo and default bias can hamper the emergence of competition and dampen it when consumers are disengaged and do not switch to better offers. While promoting switching and increasing the number of consumers who switch is good for competition, there is a risk that competition may take place only for “active” consumers, while “inactive” consumers might end up paying higher prices (Fletcher, 2019). This raises particular concerns when lack of switching ends up hurting the lowest income and vulnerable consumers in the midst of the currently ongoing cost-of-living crisis.

Cases concerning exclusionary conduct have been perhaps most affected by the use of behavioural economics (OECD, 2022[40]). While behavioural economics might not be mentioned explicitly in competition decisions, there are examples of cases that have clearly relied on insights from this discipline to provide a more compelling explanation of anti-competitive effects, which in turn has had an impact on the design of remedies.

Box 6. Switching and loyalty payments

The following example from the UK concerns a consumer protection and regulatory case, and not an abuse of dominance. However, it provides important insights into how consumer inertia can have negative market effects.

In 2018, Citizens Advice submitted to the CMA (UK) a super-complaint estimating that 8 in 10 consumers paid a loyalty penalty in five essential markets: broadband, mobile, home insurance, savings, and mortgage. The loyalty penalty is the difference in price between what loyal and new consumers pay for the same service. According to the complaint, loyal consumers could pay up to GBP 877 more per year.

The CMA agreed with the findings included in the reports and asked sectoral regulators to take adequate actions. While the regulators have since then made some progress, the loyalty penalty continues to be an issue.

Below is a selection of information released by Citizen Advice on 1 August 2022 in the article: “One-in-seven customers still paying the loyalty penalty despite cost-of-living crisis” that illustrates the pertinence of the problem:*

- “Analysis of 165 000 budgets of people who came to Citizens Advice for debt help, found those with the lowest income spend almost double the proportion of their income on telecoms than the highest earners”.
- “If a customer pays the loyalty penalty across all three energy markets this could cost GBP 1 144 a year, equivalent to more than half of the current energy price cap. The GBP 95 monthly cost of the loyalty penalty is equivalent to 17 days average energy use”.
- “[…] of those paying the loyalty penalty, 18% said it’s too difficult or time consuming to switch, and a quarter of a million (3%) didn’t even know they could.

A case from Peru illustrates the importance of time in ensuring the effectiveness of switching. In 2010, its Regulatory and Competition Agency, OSIPTEL, imposed a number portability obligation. Initially, fewer than 0.5% of consumers switched to another operator each year, which has turned out to be the lowest percentage in the region when compared to other countries that had also implemented number portability (i.e. Brazil, Mexico or Ecuador). Then, in 2014, OSIPTEL demanded that period to ensure switching be shortened from 7 days to 24 hours. In the aftermath of this decision, the switching rate has reached to 1.5% in 2018.

Note: * Citizens Advice (2022), ‘One-in-seven customers still paying the loyalty penalty despite cost-of-living crises.
Source: (OECD, 2018[6]).

Box 7. The use of behavioural economics in informing the design of competition remedies

Status quo and default bias in Microsoft ((European Commission, 2009[41])): The Commission investigated Microsoft for an alleged abuse of dominant position through tying of the company's Internet Explorer web browser with the Windows operating system. In December 2009, the Commission accepted a remedy in which Microsoft agreed to install a Choice Screen that would force consumers to make an active choice from a list of 12 most widely-used web browsers. The Choice Screen clearly sought to address consumers' default or status quo bias.

Status quo and default bias in Google Android ((European Commission, 2018[42])): In 2018, the European Commission found Google guilty of abusing its dominant position in the national markets for general search services. The abuse took the form of granting revenue share payments to original equipment manufacturers (OEMs) and mobile network operators (MNOs) on condition that they would not pre-install any competing general search service on any device within an agreed portfolio. In para. 781 of the decision, the Commission has explicitly referred to the 'status quo' bias, explaining that "*pre-installation, like default setting or premium placement, can increase significantly on a lasting basis the usage of the service provided by an app [because] users that find apps pre-installed and presented to them on their smart mobile devices are likely to "stick" to those apps*". In addition to an over EUR 4 billion fine, the Commission has imposed a set of behavioural remedies addressing the identified concerns.

Following choice screen auctions that first took place in early 2020, Google began displaying to Android users in Europe choice screen for both default search engines and web browsers, which allow users to choose their preferred options instead of having to use Google's own services as default. As choice screen auctions took place in each relevant country, search engines that appeared as options varied across the countries, but in addition to Google typically included: DuckDuckGo, GMX, Info.com, Privacy Wall, Yandex, Seznam and Bing. The first results concerning the effectiveness of this remedy are not too promising as between January 2020 and 2021, Google's aggregated market share across Europe has practically remained unaltered, decreasing from 93.88% to 93.11%.[1]

The saliency bias and choice architecture in Google Shopping (EU, Brazil): Google's behaviour concerning self-preferencing of its shopping service has been and is being examined by various competition agencies. The European Commission found that Google had abused its dominant position in online search by lowering the ranking of unpaid search results and granting more favourable placement to the results of its own vertical search services. The proposed commitments revolved around offering more prominent presentation of vertical search rivals ("architectural remedies") and clearer labelling ("labelling remedies"). While the decision does not expressly refer to saliency bias, it relies on it implicitly.

For example, in analysing user behaviour, the Commission noted that generic search results generate a vast proportion of traffic to a website when they are ranked within the first three to five generic search results on the first general search results page. Five highest-ranking generic search results on the first Google general search results page receive around 77% of all clicks, whereas top ten – 95%. The beginning of the second general search results page generates only slightly more than 1% of clicks (paras. 454-457 of the decision).[2]

Also, the Brazilian competition agency, CADE, has examined whether Google favoured Google Shopping over its Brazilian rivals (Buscape, Bondfaro, etc). Among other, CADE considered whether Google was influencing and biasing consumer choice through choice architecture. It concluded that consumers could choose Google Shopping not because they actually preferred it but due to Google's nudging which exploited consumers' cognitive biases. However, in contrast to the decision of the European Commission, the Tribunal of CADE dismissed the case as it found no evidence of competitive harm in the market.

Notes: [1] Statcounter (2022), Search Engine Market Share Europe Jan 2020 – Dec 2021 (last accessed November 7, 2022).[2] European Commission (2017), Case AT.39740, Google Search (Shopping).
Sources: (OECD, 2022[40]).

The effectiveness of the type of remedies adopted in the EU in *Google Android* and *Google Shopping* cases have been subject of various academic studies. (Ostrovsky, 2021[43]) examined choice screen auctions that had been deployed in 31 European countries in the aftermath of the *Google Android* decision. He found that while choice screen auctions can help create a more-level playing field, a seemingly minor detail in their implementation, i.e. whether they rely on a ‘per appearance’ or ‘per install’ basis, can lead to different outcomes, altering the overall effectiveness of the remedy.

(Hyman, 2015[44]) carried out an empirical study to examine the impact of architectural and labelling remedies that have been imposed in *Google Shopping*. They found that “*the architecture of the SRP [the search results page] (i.e. the way in which search results are graphically arranged on the page) is far more important than any labels that might appear on that page. User awareness of labelling is low, and even labels far more explicit than those currently employed do not dramatically improve consumer awareness of whether content is paid or unpaid. Stated differently, consumer knowledge and behaviour appear to be the result of sticky expectations about how search results are displayed, irrespective of how the results are labelled. These findings indicate the impact of architectural remedies (if any) will depend greatly on how they are designed, while labelling remedies (if any) are unlikely to have a significant impact. Regulators and judges should take account of these findings in considering the utility of ordering a remedy*”.

The two studies cited above illustrate how important it is that competition agencies have a proper understanding of how consumers actually behave if they are to design effective demand-side remedies.

When designing consumer-facing remedies competition authorities should take into account the fact that consumers’ preferences, access to technologies, digital as well as sector-specific skills (i.e. think of financial literacy), which are relevant for consumers both in an offline and online environment, are likely to vary across jurisdictions and markets. For example, with respect to shopping around remedies, the OECD advocates for the development of commercial digital comparison tools and their adequate governance. However, it also points out that as comparison tools will not be used by all consumers, a particular concern arises if online prices are significantly lower than those available offline (OECD, 2018[6]). More importantly, success of consumer-facing remedies depends on their ability to help consumers overcome their behavioural biases, and sometimes such remedies may turn out to be insufficient. In such situations, if supply-side remedies are also insufficient, direct regulatory intervention might be warranted.

4 Compliance, monitoring and ex-post assessment

Effective enforcement requires competition agencies to devise adequate monitoring mechanisms, have powers to act in case of non-compliance, and commit sufficient resources to monitoring.

Effective monitoring is fundamental for ensuring the effectiveness of the remedy. A remedy which is effective in theory might perform poorly if firms decide to circumvent or distort it or not comply altogether assuming, on the basis of the agency's track record, that it will not monitor thoroughly the implementation process. If non-compliant firms could rationally expect that the risk of fine or other form of punishment (i.e., the imposition of harsher remedies) for non-compliance is low, the credibility of any remedy or commitment procedure becomes questionable.

To monitor the implementation of remedies competition agencies usually resort to reporting obligations and the appointment of a monitoring trustee in case of particularly complex and monitoring-intensive remedies. When regular monitoring is mainly based on the contractual compliance with the commitments, competition agencies may be sufficiently well placed to ensure adequate compliance. This is particularly the case with the so-called self-monitoring remedies where third-party market participants can be expected to report non-compliance.

The choice of appropriate monitoring tools depends on the specificities of the case and the market in question. This means, for example, that reporting obligations, which are used in most cases involving Behavioural remedies, might be prescribed with a different frequency. While in some cases annual reporting will suffice,[38] in others more frequent reports might be necessary; for example, every six or four months.[39]

Ongoing monitoring of behavioural remedies is particularly resource-consuming when their effectiveness hinges on the adequacy and highly prescriptive nature of other complementary or ancillary remedies.

Box 8. Conduct-regulating and complementary remedies

Duty to grant access: The mere obligation to grant access is likely to fail if the terms of access are not specified. Obligation to grant access, which is of central importance in sectoral regulation (i.e. telecom, energy, transport) tends to be complemented by other obligations that basically seek to ensure that access is effectively granted. Such supplementary obligations can take many forms, and demand, for example, accounting separation, price controls, transparency, or non-discrimination. As precise meaning of at least some of these terms is open to interpretation, firms may frustrate compliance by litigating such terms in court to evade, neutralise or minimise the indented effects of imposed remedies (examples from the telecommunications sector where access decisions are among the most disputed ones abound). Ensuring effectiveness of such ancillary remedies as transparency or non-discrimination might require access to and ongoing monitoring of firms' relevant KPIs. However, such form of control seems to be more appropriate for a sectoral regulator rather than a competition authority.

Rebates: In April 2020, the French Competition Authority (Conseil de la Concurrence) concluded its 10-yearlong investigation of anti-competitive loyalty and bundled rebates offered by La Poste (the French postal incumbent). The Authority modified proposed commitments to reduce the risk of circumvention. In particular, it accepted commitments aimed at ensuring the effectiveness of other commitments that were designed to put an end to bundled pricing and to remove the loyalty effect from the rebates. These complementary commitments involved putting in place an adequate IT archiving tool to keep record of client contracts, quotes, rebates, invoices, software used to calculate rebates, as well as organisation of dedicated trainings on competition law.

Competition agencies may opt for a monitoring trustee as their preferred choice when (i) they are resource-constrained, or (ii) when proposed commitments are complex and likely to raise uncertainty as regards their interpretation, possibly undermining their efficiency and effectiveness.[40] Monitoring Trustees are typically appointed by the company and are subject to approval by the competition agency. For example, in Brazil, CADE's Guide on Antitrust Remedies expressly states that "given that CADE is unable to be directly and continuously involved in the monitoring of the commitments execution regarded with the antitrust remedies, a monitoring trustee is desirable to assist the agency in monitoring and ensuring the fulfilment of the obligations".[41] In that regard, it is worth mentioning Article 22 of the Colombian Competition Law No. 1340 of 2009. It provides that defendants who have offered guarantees to clear a proposed merger or close an investigation concerning anti-competitive practices, must make an annual payment to cover the cost of the SIC's compliance monitoring activities.[42]

Effective monitoring requires competition agencies to have adequate tools in case of non-compliance. For example, Article 24(1)(c) of Regulation 1/2003 foresees that the European Commission can impose periodic penalty payments not exceeding 5% of the average daily turnover in the preceding business year per day to compel firms to comply with Article 9 commitment decisions. In January 2022, Colombia enacted Law 2195, which introduced changes to several laws, including Law 1340 of 2009 on the Protection of Competition. In particular, the new law now considers non-compliance with commitments imposed by the competition authority as an aggravating factor in the calculation of fines.[43]

Box 9. Examples of non-compliance with binding commitments

In **Mexico**, in 2018, Praxair submitted commitments to COFECE with a view to close an investigation concerning an alleged abuse of dominance in the market for distribution and commercialisation of oxygen, nitrogen and liquid industrial argon (file DE-006-2014). In June 2022, the Board of Commissioners of COFECE found that Praxair had failed to comply with the commitments and decided to fine the company with MXN 237 876 000. Praxair failed to comply with the commitments, as, among others, it did not amend, as requested, its contracts with the customers, and failed to submit information concerning the verification process.

In the **EU**, in 2013, the Commission imposed on Microsoft a EUR million 561 fine for failing to comply with the commitment to introduce a choice screen that would offer Windows users a choice of various web browsers. To date, it remains the only non-compliance decision at the EU level.

With respect to the institutional setting, while some agencies may establish separate units responsible for monitoring, others may assign such a responsibility to already existing departments. For example, the US FTC's Compliance Division assists in settlement negotiations, the drafting of settlement documents as well as monitors and enforces consent decrees. The DoJ announced the creation of the Office of Decree Enforcement to enhance compliance by parties to current consent decrees and agency's enforcement of those decrees in 2018 (US DoJ, 2018[45]). Colombia has modified the structure of its competition agency, the Superintendence of Industry and Commerce (SIC). With the Decree 092 of 24 January 2022, it has created the Compliance Directorate (*Dirección de Cumplimiento*), which is now in charge, among others, of monitoring compliance with the guarantees and conditions accepted by the agency during administrative investigations concerning breaches of competition law as well as enforcement if such guarantees have been breached.[44]

When monitoring compliance, competition agencies can act on their own or may request the co-operation of other relevant bodies, including sectoral regulators. For example, according to Article 41 of the Spanish Competition Act 15/2007, the CNMC "may request the co-operation of the autonomous competition bodies and of the sectorial regulators in monitoring and fulfilling obligations, resolutions and decisions". Where competition and sectoral agencies operate separately, co-operation may require the adoption of a Memorandum of Understanding (MoU), which is a common practice, or other tools that would govern such co-operation. While MoUs do not specifically regulate co-operation in antirust cases, their general provisions on tools, such as notifications and consultation, can be used in this context too (OECD, 2022[46]). Where, on the other hand, competition and sectoral enforcement powers reside within the same authority, which is the case of multi-mandate agencies such as the CNMC in Spain, or the ACM in the Netherlands, then co-operation will in the first place depend on the ability of respective units to share relevant information internally, within the authority.

Box 10. Co-operation between competition and sectoral regulators in the design and monitoring of remedies

Selected examples show how interaction between competition authorities and sectoral regulators can help minimise the risk of inconsistent decisions and improve the effectiveness of remedies. While some of these examples concern merger review, they can still provide valuable insights for co-operation in the monitoring of remedies in abuse of dominance cases.

Spain: In 2013, oil companies Disa and Shell concluded, subject to remedies, a joint venture to supply aviation fuel in the Canary Islands. As the situation in the market had not been improving, in 2016, the original remedies were extended. To monitor the evolution of the market and the compliance with the remedies the Energy Directorate of the CNMC delivered quarterly reports to the CNMC's Competition Directorate.

Portugal: In 2015, VASP, a potential competitor of CTT, the Portuguese postal incumbent operator, complained to AdC, the Portuguese competition authority, that CTT was abusing its dominant position by refusing access to its postal network. The AdC opened an investigation, and in 2017 CTT submitted commitments. Around the same time, Iberomail, another potential competitor, also complained about problems with obtaining access, but to ANACOM, the Portuguese telecom and postal regulator, which is competent in access-related disputes. In June 2017, ANACOM published a draft decision compelling CTT to broaden the scope of its Postal Network Access offer. In light of this decision, the AdC had to consult ANACOM in the process of evaluating commitments to ensure a coherent outcome.

The Netherlands: When KPN and Reggefiber notified the creation of a joint venture to the NMA and OPTA, (respectively the ex Dutch competition and regulatory authority that have been merged into the ACM), both authorities co-operated closely. OPTA regulated the copper and optical fibre networks, while the NMA cleared the merger under conditions consistent with those imposed by OPTA. Since the conditions imposed by the authorities were to a great extent identical, OPTA was better placed to serve as 'the first stop for market participants in case of a violation of the merger commitments by KPN or Reggefiber'. In this way the NMA was able to impose an extensive regime through proper co-operation with OPTA. Such co-operation is particularly important when one of the accepted behavioural remedies concerns the provision of non-discriminatory access at regulated prices (Pisarkiewicz, 2018[29]; Hesseling, D. and T. Vermuelen, 2011[47]).

Brazil: In clearing a recent telecom merger between the largest operators subject to a divestiture and behavioural remedies, CADE considered the conditions previously imposed by the telecom regulator (ANATEL). In contrast, when imposing behavioural remedies on a merger involving Brazil's largest railroad operator and a logistic company, which had first been approved by the sectoral regulator, ANTT, with no remedies, CADE took the view in the presence of many incentives to engage in post-merger discrimination, it would be difficult for the sectoral regulator to monitor and prosecute these practices (OECD, 2022[40]).

While collaboration between competition and regulatory authorities in mergers cases provides many valuable insights, it also reveals some relevant differences. In the review of merger transactions, each authority's assessment is inevitably prospective. This means that a competition authority can issue a decision assuming whether sectoral regulation will be able to effectively curb firms' incentive and ability to behave anti-competitively or not. In contrast, in abuse of dominance cases, competition agencies' assessment takes place ex-post, which means that they do not have to speculate about the effectiveness of sectoral regulation; they can instead examine whether such regulation has been imposed and enforced effectively.

4.1. Ex-post evaluations

In a perfect environment, competition authorities would not only monitor the company's compliance with the imposed remedy but would also evaluate remedies' effectiveness. Ex-post evaluations examine the effects of the enforcement decision on the market sometime after the decision has been issued and seek to ascertain whether there is a link of causality between the decision and market changes (OECD, 2016[5]). Such evaluations are more frequent in the context of mergers than abuse of dominance cases, where they continue to be sporadic. This is not only because abuse cases are much rarer than merger transactions, but also because they face a higher level of complexity. Still, such exercises would be extremely valuable as they would help design better remedies in the future.

Ideally, the objective of ex-post evaluation in abuse of dominance cases would be to determine whether an agency's intervention was correct, and in particular whether it has restored competitive conditions in a given market. Such evaluation in abuse cases is more complex than in merger cases. Evaluation studies examine how the market would have evolved in the absence of the decision. In a merger case, an agency's decision to clear a proposed transaction might lead to a reduction of competition and its effects can be assessed against the pre-merger situation. In an abuse case, an ex-post evaluation study has to investigate first whether the abuse has effectively distorted competition before it can evaluate whether a competition authority's decision has been able to remove the potential anticompetitive effects of the abuse. Since an ideal counterfactual, which should describe a market situation in the absence of the abuse, might not always be representative, the identification of the control group and the right counterfactual, need to be thought more carefully (European Commission, 2017[48]).

Box 11. Ex-post evaluation of remedies in abuse cases

European Union

In 2016 and 2017, the European Commission carried out economic impact assessment of the enforcement of competition policies on the functioning of EU telecom and energy markets. The report on the telecoms market included an evaluation of a prohibition decision in the Telekomunikacja Polska (2011) case, while the report on the energy market included an evaluation of a commitment decision in the E.On (2008) case. Both examples demonstrate that robust ex-post evaluations require a combination of descriptive analysis of market developments and more experimental methods, such as the Difference-in-Difference (DID) analysis. They also rely on the availability of and access to high quality data, which is often a challenge. Since market participants may be reluctant to provide necessary data, it is important to ensure that competition agencies are empowered to collect such data for the purpose of ex post evaluations.

South Africa

(Bonakele, 2020[49]) refers to three impact assessments that the Competition Commission carried out with respect to remedies in abuse of dominance cases: one from 2012 (Pioneer Food Group Limited), and two from 2017 (Telkom SA SOC Limited and Sasol Chemical Industries (Pty) Ltd).

In the Telkom SA SOC Ltd case, the Competition Commission accepted a functional separation that required the introduction of accounting separation as well as ensuring that the wholesale division would not share commercially sensitive information about retail competitors with its downstream division. The 2017 impact assessment study showed that competition dynamics in the sector has changed: there has been entry both in the upstream and downstream market, Telkom's competitors' market share has grown, while prices for key access connectivity products have fallen.

The Sasol Chemical Industries case concerned excessive pricing, refusal to supply, price discrimination, price fixing and market allocation among vertically integrated fertiliser producers. To address concerns about unilateral behaviour, Sasol agreed to both structural and behavioural remedies.

The impact assessment study, carried out in 2017, demonstrated that Sasol's divestiture of its blending facilities facilitated entry and expansion in the blending and distribution market. In particular: "Three new larger firms entered through the acquisition of the five divested plants from Sasol and several smaller blenders and distributors also entered the market. The smaller entrants complemented fertiliser supply by the larger players, focusing on the supply of specialised fertilisers which would ordinarily not be supplied by the larger players. The impact study further indicated that the number of blenders (and traders) increased from approximately fifteen in the period prior to the intervention to approximately sixty-five throughout South Africa. Moreover, the remedies led to fertiliser prices being reduced and the price differences between regions removed. This dynamism in the market gave rise to substantial consumer savings of between ZAR 1 billion and ZAR 10.5 billion in the period 2010 to June 2015".

Sources:
(Bonakele, 2020[49]); (South Africa Competition Commission, 2017[50]).

Earlier we have mentioned that behavioural economics can help design better demand-side remedies, contributing to an overall better understanding of firms' behaviours and their effects on consumers. However, behavioural biases do not only affect market players. Public authorities can exhibit them too.[45] Some biases can be particularly relevant for the agencies in the process of carrying out impact assessment and ex-post evaluation of remedies. When evaluating the effectiveness of the imposed remedies and accepted commitments, agencies will have to, for example, explain what has happened once the remedy has been implemented. In doing so, they can be affected by 'post-rationalisation', which is closely linked to 'hindsight bias', the common tendency for people to consider events as more predictable than they actually are. This means that if something unpredictable happens after the implementation of a remedy, agencies could formulate narratives that would conveniently explain how the unpredictable element actually logically fits to their pre-implementation assumptions (Busch, 2020[51]). One way to address such biases would be to require competition authorities to spell out their assumptions concerning the choice of remedies in the decisions imposing the remedies. While this could expose the authorities to more criticism should their decisions be based on wrong assumptions, it could also allow for a more accurate ex-post evaluation, and in turn prescription of better calibrated remedies in the future.

5 Conclusions

Remedies are a crucial element of competition policy enforcement. As markets become increasingly complex and dynamic, so might remedies that will be needed to address potential competition problems. Designing and implementing workable remedies is inevitably a difficult and complex task. However, it is essential to get this task right in order to effectively address the identified competition concerns. At the same time, when designing remedies, which in contrast to commitments, are not voluntarily proposed, competition agencies should be particularly meticulous in ensuring that they are proportionate. Disproportionate or otherwise inadequate remedies might limit firm's autonomy to such an extent that the firm will find itself impaired and forced to operate contrary to its incentives. If incentives to act anti-competitively originate from the very structure of the firm's business model, then competition agencies should consider the feasibility of imposing a structural remedy, drawing lessons from numerous self-initiated divestitures or divestitures that were imposed in sector-regulated industries.

In terms of voluntarily proposed commitments, the discussion would benefit from more research on whether they indeed produce procedural efficiencies leading to swifter resolutions. In case they do, it should always be considered whether such efficiencies outweigh their inferior precedential value. If swift intervention is of particular importance in fast changing digital markets, the benefits and deficiencies resulting from the use of commitments should be compared to the alternative or improved use of yet another procedure; that of interim measures (OECD, 2022[52]).

Moreover, competition agencies should be mindful that everyone, i.e. consumers, firms, and agencies themselves can all be subject to various biases. Insights from behavioural economics and behaviour public policy might help address such bias. Finally, to ensure that remedies and commitments deliver best possible outcomes, competition agencies should consider carrying out ex post assessments of the imposed remedies and commitments to evaluate their effectiveness in the specific case and across sectors. While such assessments are more common in the context of merger remedies, they should be undertaken more frequently also in abuse of dominance cases.

Main take-aways

The mere finding of an abuse of dominance will do no good to competition if it is not accompanied by an effective and proportionate remedy.

To design and implement effective remedies, competition agencies might want to consider the following:

- **Identify potentially adequate remedies as early as possible in the process**. In doing so, ask:
  - Is the remedy sufficient but also proportionate in relation to the identified problem?
  - Does the agency have the power to impose such a remedy, and the resources and the expertise needed to oversee its effective monitoring?
- **As a rule, behavioural remedies should be applied in abuse cases**. Since dominance as such is not prohibited under most laws, structural remedies will remain the exception and require a close causal link to the abusive behaviour. This could be the case in network industries with vertically integrated firms, and regulatory experience can inform competition agencies' approaches.
- **Complex competition problems might demand complex remedies**. Often, a single remedy will be unable to provide a sufficient solution, which is why a comprehensive remedy package might be needed. This may consist of a set of behavioural remedies or a mix of a structural and behavioural remedies, which may need to address competition issues on both supply- and demand-side of the market in question. Demand-side (consumer-facing remedies) will require insights from behavioural economics to identify and address existing consumer biases. At the same time, overly complex remedies may increase monitoring cost, lead to litigation and could be ineffective in the worst case. Careful balancing will be required.
- **Consider adopting guidelines on the use of remedies and commitments in abuse of dominance cases**, with a particular focus on the design and monitoring. Guidelines, as a soft law measure, offer useful information to market players about competition agencies' likely approach, thereby contributing to a higher level of predictability. In particular, such guidelines could:
  - Spell out conditions in which structural or behavioural remedies would be preferred and provide a non-exhaustive list of behavioural remedies that could be imposed.
  - Provide scenarios where the appointment of a monitoring trustee would be warranted.
  - Where national law foresees both remedies and commitments, as in the EU, clarify differences between the procedures governing their use, ensuring that these two tools are distinct in terms of incentives and benefits they offer.

Guidelines on the use of remedies in abuse of dominance cases could draw on vast experience with the use of remedies in much more frequently reviewed merger cases, highlighting similarities and differences in the preferred approaches.

- **Ensure that your enforcement and monitoring track record sends strong signals to market players**. To make enforcement credible, an agency needs to devise adequate monitoring mechanisms, have powers to act in case of non-compliance, and commit sufficient resources to monitoring.
- **Engage in institutional co-operation with other agencies to enhance the design and monitoring of remedies**, which might require increasingly multi-disciplinary expertise. Adequate arrangements with consumer protection, privacy protection, and sectoral regulatory authorities should be in place.
- **Carry out ex post evaluations** of the effectiveness of remedies in specific cases to address the identified competition problems as well as the overall impact of an agency's approach to remedies on (i) the overall deterrence, (ii) the frequency of judicial litigation, and (iii) an agency's culture and development of the necessary enforcement skills.

Endnotes

[1] See for example, (Gerard, D. and A. Komninos, 2020[65]); (Feasey, R. and J. Krämer, 2019[66]); (Gautier, A. and N. Petit, 2018[67]); (OECD, 2016[73]); (Marquis, Lowe and & Monti, 2016[74]).

[2] Competition authorities can also close the case with a non-infringement decision or avoid adopting any decision altogether if they find no violation of the competition law.

[3] EU Regulation 139/2004 on the control of concentration uses the term 'commitments' and does not mention even once the term 'remedy', to refer to measures proposed by firms that are parties to the transaction they want to clear. However, the Commission Notice on remedies acceptable under Regulation 139/2004 explains that modifications to concentrations, in particular commitments, proposed by the parties are more commonly described as 'remedies' since their object is to eliminate the competition concerns. Indeed, most jurisdiction around the world refer to remedies in the context of merger control.

[4] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, O.J. [2003] L 1/1/.

[5] For example, most of the EU Commission's investigations in the energy sector ended with the adoption of commitment decisions, whereas in the telecom sector the Commission preferred to adopt prohibition decisions.

[6] *EU Commission Decision (2017), Case AT.39740, Google Search (Shopping).*

[7] See, for example, (Hoppner, 2020[61]) and (Marsden, 2020[69]) for the discussion of the remedy package in the EU's *Google Shopping* case.

[8] For example, an average length of prohibition decisions issued in the EU between 2004 and September 2022, has been 246 pages in contrast to 25 pages of commitment decisions. In this regard it is worth noting that commitment decisions are just a little bit longer than rejection decisions, which on average in the same period were 17-pages long. This information has been extracted from the European Commission's decisions that has been searched on its official website: https://ec.europa.eu/competition/elojade/isef/index.cfm?clear=1&policy_area_id=3

[9] Article 16.2(5) foresees that "Each party shall authorise its national competition authorities to resolve alleged violations voluntarily by consent of the authority and the person subject to the enforcement action. A Party may provide for such voluntary resolution to be subject to judicial or independent tribunal approval or a public comment period before becoming final.

[10] Law No. 7246 amending Law No. 4054 on the Protection of Competition. Prior to the amendment, Turkey relied on Article 9(3) of the Competition Law, which had been used as a basis for a quasi-commitment procedure whereas sanctions for non-compliance with that procedure were governed by Articles 16 and 17 of the Law. The main difference between Article 9(3) and the recently introduced Article 43 concerns the involvement of third parties. Turkey has also published Communiqué 2021/2 on the Commitments to

be offered in preliminary inquiries and investigations concerning agreements, concerted practices and decisions restricting competition, and abuse of dominant position.

[11] India (2022), The Competition (Amendment) Bill 2022.

[12] For example, in Japan the commitment procedure does not apply to cases in which a firm had been subject to a final and binding legal measure for / ten years prior to the date […]. It also does not apply in cases involving vicious and serious suspected violations which hare considered to have widespread influence on people's livings, as a result of substantially restraining competition of a particular field of trade as described in 'JFTC Policies on Criminal Accusation and Compulsory Investigation of Criminal Cases Regarding Antimonopoly Violations'. JFTC (2018).

[13] Given the consensual nature of the commitment procedure means that firms that have proposed the commitments will generally not have an incentive to challenge them in court. If they do, they could argue that final commitments are disproportionate. As for third parties, they could argue that adopted commitments are either disproportionate or insufficient. To do so they need to have first standing to appeal the decision. If they do, their likelihood of succeeding will depend on whether applicable rules and case-law have set excessive limits vis-à-vis competition authority's discretion.

[14] For example, in Japan commitments are exempt from administrative fine orders (OECD, 2016[70]). Fines in abuse of dominance have increased in most regions during the period 2015-2018. According to (OECD, 2022[1]), such fines have increased by 1149% in 2018 in comparison to 2015, which correspond to 132% compound annual growth rate. Then, abuse of dominance fines have dropped by 64% in 2019, and by 55% in 2020. The peak in 2018 was primarily driven by abuse of dominance cases in few jurisdictions in Europe as well as some in the Americas. Also, most EU cases concerned mostly infringements in digital markets.

[15] *EU Commission Decision (2017), Case AT.39740, Google Search (Shopping).*

[16] *Case C-119/97 P, Union Francaise de l'Express (UFEX)*, ECLI:EU:C:1999:116, para. 94. See also (Hellström and Maier-Rigaud, 2009[75])

[17] *Brunswick Corp. v. Riegel Textile Corp.,* 752 F.2d 261, 267 (7th Cir. 1984).

[18] United States Supreme Court (2003), Verizon Communications, Inc. v. Law Offices of Curtis v. Trinko, LLP, 540 U.S.

[19] For example, the Commission made the commitments binding for a period of 7 years in Case AT.39.654, *Reuters Instrument Codes* (2012) and for a period of 10 years in Case COMP/39.351, *Swedish Interconnectors* and in Case AT.40394, *Aspen*. The exceptionally long 10-year period in the *Swedish Interconnectors* (2010) case was necessary according to the Commission as it contained behavioural elements regarding the change of the configuration of the bidding zones which could become necessary due to a change of demand and supply of electricity overtime (para. 96 of the decision). In *Aspen*, the Commission decided that the remedy in the form of Aspen's reduced net prices would apply for a period of 10 years, with on possible review after 5 years. According to the Commission, such an initial 5-year supply commitment, supplemented by an additional one of 5 years, is both proportionate and sufficiently long to protect third parties' interests. Information concerning the length of the application period has been extracted from the European Commission's decisions that has been searched on its official website: https://ec.europa.eu/competition/elojade/isef/index.cfm?clear=1&policy_area_id=3

[20] *Commission Decisions (2004), Case COMP-37.792, Microsoft*.

[21] European Commission Notice on best practices for the conduct of proceedings concerning Articles 101 and 102 TFEU, O.J. [2011] C 308/6.

[22] Case C-441/07 P, *European Commission v Alrosa Company Ltd*, ECLI:EU:C:2010:377.

[23] Case T-616/18, *Polskie Górnictwo Naftowe i Gazownictwo S,A, (PGNG) v Commission*, ECLI:EU:T:2022:43.

[24] This line of argument originates from the Structure Conduct Performance (SCP) paradigm, which foresees that structure of the market shapes firms conduct which in turn determines performance in the market.

[25] It may be easier to prove the proportionality of a structural remedy if it is voluntarily proposed by the firm itself ((Loertscher, 2020[63]) referring to the Commission Decision, AT.39759 – *Ara Foreclosure* (2016).

[26] However, as business models evolve, it is necessary to carefully evaluate whether the core of the company business has been shifting to ensure that once separated, both core and ancillary parts will remain viable.

[27] Commission Decision of 22 June 2011, *COMP/39.525 – Telekomunikacja Polska*.

[28] As explained by (Cave, 2006[76]), there are different forms of separation, ranging from account separation to full ownership separation. (Kwoka and Valletti, 2021[28]) observe that in the regulated industries milder forms of regulation have often turned out to be either insufficient or ineffective.

[29] It may be interesting to note that tower companies seem to outperform telecom operators from which they have been carved out. See, for example (BCG, 2022[55]).

[30] European Commission (2021), *Case AT.40394 – Aspen*.

[31] European Commission (2012), *Case AT.39654 – Reuters Instrument Codes*.

[32] European Commission (2005), *Case COMP/A.39.116/B2 – Coca-Cola.*

[33] European Commission (2021), *Case AT.40394 – Aspen*; European Commission (2013), *Cases AT.39678 and AT.39731 – Deutsche Bahn I and II*; French Conseil de la Concurrence (2020), Decision No. 20-D-06 of April 2, 2020 relating to practices implemented in the parcel delivery sector.

[34] European Commission (2012), *Case AT.39654 – Reuters Instrument Codes*.

[35] French Conseil de la Concurrence (2020), Decision No. 20-D-06 of April 2, 2020 relating to practices implemented in the parcel delivery sector; South Africa Competition Tribunal (2009), *Case No. 31/CR/May05 – The Competition Commission and Sasol Chemical Industries Ltd*.

[36] European Commission (2016), Case AT.39745 – *CDS Information Market*.

[37] See for example, (De Moncuit, 2020[60]), (OECD, 2017[71]) and (Walker, 2017[54]).

[38] See, for example, the following EU Commission's decisions: Case COMP/A.39.116/B2, Coca-Cola (2005); Case COMP/39.386, Long-term contracts in France (2010).

[39] Six-month reporting period was imposed in case AT.39.654, Reuters Instrument Code (2012) whereas four-month reporting period was imposed in case AT.39740, Google Shopping (Search).

[40] See for example, European Commission (2012), *Case AT.39654 – Reuters Instrument Codes*, para. 68-72.

[41] While CADE's Guide on Antitrust Remedies concerns mergers and acquisitions only, it acknowledges that remedies can be applied also to anticompetitive practices.

[42] Colombia Competition Law No. 1340 of 2009.

[43] Colombia, Law 2195 of 2022.

[44] Colombia (2022), *Decree 092 of 2022 which modifies the structure of the Superintendency of Industry and Commerce and determines the functions of its departments* (*Decreto 092 de 2022 por el cual se modifica la estructura de la Superintendencia de Industria y Comercio, y se determinan las funciones de sus dependencias*).

[45] Research on behavioural public administration explores cognitive and decision biases amongst bureaucrats. While it is not yet mainstream, it has grown remarkably over the last decade. See, for example, (Gofen, A. et al, 2021[72]).

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