EX-POST ASSESSMENT OF MERGER REMEDIES

OECD Competition Policy Roundtable Background Note

Please cite as: OECD (2023), Ex-post Assessment of Merger Remedies, OECD Competition Policy Roundtable Background Note, http://www.oecd.org/daf/competition/ex-post-assessment-of-merger-remedies-2023.pdf

This document was originally released on O.N.E. as an unclassified document under the reference code: DAF/COMP/GF(2023)4.

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Foreword

Merger remedies are an important aspect of merger control, which is itself at the forefront of preserving effective competition. However, getting merger remedies right is no easy task. Ex-post assessment of merger remedies is a tool to help authorities assess their practices and, if necessary, make improvements to better protect competition in the future.

Ex-post assessments are not without challenges, incurring financial and potential reputational costs for the authority, as well as on stakeholders. Nonetheless, striving for best practice is likely to enhance, rather than harm, an authority's reputation, and experience from some competition authorities demonstrates the value of such studies. Importantly, complex quantitative methods, while useful, are not a prerequisite for a valuable ex-post assessment, and the scope of the assessment can be tailored to the resources available.

This background note was prepared by Richard May of the OECD Competition Division, with helpful comments from: Ori Schwartz, Antonio Capobianco, Maria Canedo and Federica Maiorano also of the OECD Competition Division. It was prepared as a background note for discussions on "Ex-post Assessment of Merger Remedies" taking place at the 2023 Global Forum on Competition on 7-8 December 2023, *https://www.oecd.org/competition/globalforum/ex-post-assessment-of-merger-remedies.htm*. The opinions expressed and arguments employed herein are those of the authors do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

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1 Introduction

There is increasing speculation that overall levels of competition have decreased in many economic sectors over the last few decades (OECD, 2018[1]), with several studies suggesting higher levels of concentration and lower competitive intensity, such as (OECD, 2019[2]), (De Loecker, Eeckhout and Unger, 2020[3]) and (Koltay, Lorincz and Valletti, 2022[4]). Within this context, effective merger control has never been more important.

As well as the prohibition of mergers, a crucial part of merger control is merger remedies, which allow transactions to proceed while neutralising the expected anticompetitive effects.[1] If such remedies are ineffective at restoring competition, this will undermine the overall purpose of merger control.[2] The effectiveness of merger remedies is therefore something competition authorities around the world rightly strive for. Further, as the economy has evolved in the digital age, the requirements for effective remedies may have changed. In this context, it has never been more important to ensure that the suite of merger remedy tools at the disposal of authorities are fit for purpose and being used appropriately.

Merger remedies may not be everyday activities for many competition authorities. According to the OECD's CompStats dataset, between 2015 and 2020, just over 2% of all merger decisions involved a remedy, either at Phase I or II.[3] Nonetheless, this equates to at least 200 decisions every year, although this experience is concentrated within certain jurisdictions, as detailed in Box 1.[4] A lack of volume of merger remedies does not however imply limited value in improving practices. On the contrary, given limited experience, the need could arguably be greater as there is less opportunity to learn through doing. Ultimately, unlike other areas of antitrust or competition policy, there are often numerous merger investigations by authorities, providing a rich opportunity to learn from past experience (Carlton, 2009[5]). While not every merger will result in remedies, there are still likely to be past examples to study.

Ex-post assessments of merger remedies consider previous merger remedies after the fact and assess their effectiveness.[5] In reviewing how well previous remedies have worked, it is possible to identify any aspects that could be improved and to learn from the experience. These assessments can take many shapes or forms, for example focusing on whether the correct remedy was chosen or on how it was implemented. There are a range of terms that can be used to describe ex-post assessments of merger remedies, such as ex-post evaluations, merger remedy studies, merger remedy case studies amongst many others. For the purposes of this paper, the terms ex-post assessments of merger remedies or merger remedy studies, and sometimes studies or assessments, will be used. These need to be separated from more general ex-post assessment of merger decisions, which do not include remedies.

Ex-post assessments of merger remedies have not previously been discussed directly by the OECD Global Forum on Competition (GFC), nor the OECD Competition Committee or its Working Parties. However, there have been several discussions on closely related or adjacent topics. For example, ex-post assessment more generally has been the topic of numerous Roundtables at the OECD, including in the Committee the "Impact Evaluation of Merger Decision" in 2011 (OECD, 2011[6]) and "Evaluation of the Actions and Resources of the Competition Authorities" in 2005 (OECD, 2005[7]). Further, between 2012 to 2016, the evaluation of competition interventions was a strategic priority of the Committee, and culminated in the production of a "Reference guide on ex-post evaluation of competition agencies' enforcement decisions" in 2016 (OECD, 2016[8]).

Beyond considering ex-post assessment, merger remedies themselves have also been the subject of discussion on several occasions, for example (OECD, 2003[9]), (OECD, 2011[10]) and (OECD, 2013[11]). More generally, merger control has been a frequent topic for Roundtables at the Committee and the GFC and many of these conversations have touched on issues related to merger remedies, not least the recent discussion on the "Disentangling Consummated Mergers: Experiences And Challenges" (OECD, 2022[12]). The committee has also discussed other types of remedies in the past, for example considering remedies in the context of abuse cases in 2022 (OECD, 2022[13]), which may have some overlaps with relevant issues for merger remedies.

The focus of this paper is the ex-post assessment of merger remedies rather than of merger decisions more generally, although merger remedies are of course intrinsically linked with the competition issues identified during the merger process. Nonetheless, merger remedies are a separate process involving their own set of distinct tasks. While the design of remedies is linked to the findings of the case (e.g., a remedy might fail because the wrong issue was identified), there may be alternative choices of remedy for a given competition issue.[6] Merger remedies may also present different opportunities for ex-post assessment than other merger decisions. This is because, unlike clearances or prohibitions, a competition authority sets the conditions for the merger to continue, which could include designing the remedy with ex-post assessment in mind. Despite focusing on ex-post assessments of merger remedies, many of the principles for ex-post assessment of other decisions, including merger clearances and remedies in other types of cases, will be relevant.

Notwithstanding the potential benefits of performing ex-post assessments of merger remedies, they are not without challenges, requiring both resources and information. They are also only valuable after learnings are implemented, just identifying learnings in themselves does little to improve things. As such, this paper also seeks to provide some practical guidance on how to perform such assessments. It is also worth noting that ex-post assessment is separate from compliance of merger remedies, with the focus on observing and learning from experience rather than ensuring effectiveness of the remedy in question. However, there are likely to be interactions between compliance and ex-post assessment in some circumstances, including some opportunities, and the paper therefore also touches on these links.

This paper is structured as follows. The first section describes ex-post assessments of merger remedies, introducing the various types of study that are possible and introducing previous examples. This section also considers the reasons why authorities, or other entities, might wish to consider conducting such assessments. The next section considers approaches to ex-post assessments of merger remedies, and the different methodologies available. Next, section four discusses the interaction between other ex-post assessments and other elements of remedy implementation, such as monitoring and sunset reviews. The final section provides examples of the learnings that have been derived from previous ex-post studies of merger remedies, with a view to highlighting their value and the potential for general lessons that can be taken from one jurisdiction to another. To finish, the paper concludes.

Box 1. Merger remedy experience across jurisdictions

The OECD CompStats database receives data from large numbers of jurisdictions across the world, including from member and non-members of the OECD. For the years 2019 and 2020, the median number of merger remedies per year for these two years was one, with many jurisdictions not imposing any merger remedies in a given year. The largest three jurisdictions on the other hand, saw between 16 and 36 merger remedies per year. This significant variation in the number of remedies implies that different approaches may be required for ex-post assessments.

However, even though most jurisdictions have significantly fewer merger remedy decisions than the largest ones, further analysis of the OECD CompStats dataset suggests there may still be room for further ex-post assessment. Examining data over the full seven years for which data is available (2015-2021), 63 jurisdictions have had at least one merger remedy decision over the period, nearly 50 jurisdictions have had at least five, and only three countries that supplied data over that period had no merger remedies. Therefore, while large-scale studies may not be possible everywhere, it appears that most jurisdictions do have merger remedy practice which could benefit from review.

Note: Analysis based on underlying CompStats data, and for jurisdictions that have supplied data for much of the period in question. Remedies do not include prohibition decisions.
Source: OECD CompStats, Figure 8.9, OECD analysis of underlying CompStats dataset.

2 What are ex-post assessments of merger remedies and why do them

This section explains what ex-post assessments of merger remedies are, including the different types available. It also clarifies which issues would normally be considered within and outside their scope. It then considers why competition authorities, or other bodies, should wish to do them, as well as some of the challenges involved.

2.1. There are a range of ex-post assessments of merger remedies

Ex-post assessments, or studies, consider how well something went after the fact using the benefit of hindsight. By doing so, one can understand if predictions and actions made at the time of the decision have borne out in practice or had the intended consequences. If the assessment identifies something unexpected, or something that could have gone better, it provides the opportunity to learn and do better next time. Such lessons can range from understanding how to make better decisions, all the way through to identifying best practices for highly specific situations.

There are several different types of analysis that can fall under the category of an ex-post assessment of merger remedies, and studies of various shapes and sizes have been conducted for many years, such as with (Elzinga, 1969[14]) and (Rogowsky, 1986[15]). Those reports analysed the outcomes of US merger remedies orders and their findings ultimately led to substantial reform, not least that in many cases remedies were taking too long to be implemented. While not the focus of this report, there are also several examples of ex-post assessments that look at remedies in the field of competition but outside the scope of mergers, such as (Fletcher, 2016[16]).[7]

Before describing the different categories, it is worth noting the various aspects of merger remedies that exist. These were discussed in the introduction, where it was noted that while intrinsically linked, the merger remedy can be separated from the merger decision itself. An important distinction to note therefore is between ex-post assessments that consider the totality of the decision, including whether the correct competition issues were identified, versus those that focus exclusively on the remedy, taken the competition issue as given and considering if the right remedy was chosen and implemented. While both types of studies can look at merger remedies ex-post, and there are some examples below, the core focus of this paper is on the latter.[8]

Further, the merger remedy can be thought of a product of two steps once the competition issue that needs remedying is identified: the design of the remedy, such as a structural divestment or behaviour undertaking, and its implementation, including the process by which the remedy was enacted. Such a distinction is not clear-cut however and in practice it is likely that an ex-post assessment that considered remedy effectiveness would consider both.

2.1.1. Larger studies focusing on merger remedies

Several competition authorities have conducted large-scale studies that focused on the ex-post assessment of merger remedies, with published reports summarising their findings. These studies are perhaps the best, and the best known, examples of ex-post assessments of merger remedies and, as such, are referred to extensively throughout this paper. Some of the main examples of studies that have produced public reports from which to understand the work undertaken are:

- In the United States, the Federal Trade Commission (FTC) has conducted two large scale studies of merger remedies. The first, in 1999, focused on divestitures and covered the period from 1990 to 1994 (Competition, 1999[17]). The second, published in 2017, expanded on the earlier study to consider all merger remedies between 2006 and 2012 (Economics, 2017[18]). See Box 2 for more information.
- The European Commission published a large-scale study of the merger remedies in 40 different cases in 2005, covering 96 remedies (European Commission, 2005[19]). See Box 6 for additional information on the European study.
- The UK's Competition and Markets Authority (CMA)[9] has published several tranches of case studies of merger remedies, starting with its predecessor body in 2007. These tranches were consolidated into an updated report published in 2019, which considers the case studies of 18 merger investigations that resulted in remedies (CMA, 2019[20]). See Box 3 for further discussion of these studies.
- The Canadian Competition Bureau completed a Merger Remedies Study in 2011, assessing 23 merger cases (Competition Bureau Canada, 2011[21]). See Box 4 for more information.

Aside from published reports, ex-post assessments of merger remedies can also be conducted internally and either not published or publicised in other ways than through a report. For example, in its contribution to a recent OECD Roundtable, the Italian Competition Authority noted that it conducted an ex-post assessment of merger remedies, focusing on the divestiture of assets imposed between 2007 and 2017.[10] While a final report was not published for the study, the findings were disseminated via a webinar open to relevant stakeholders.[11] Previous research published by members of the Italian Competition Authority have included ex-post assessments of merger remedies, such as (Sabbatini, 2008[22]) which reports on assessments of two previous merger decisions with remedies conducted by the authority, albeit as part of wider studies. Another example of a report that focuses on merger remedies is from Denmark, where an external consultancy produced a report which assessed seven previous cases that were approved subject to commitments (Incentive, 2018[23]).

Box 2. FTC merger remedies studies

In the United States, ex-post assessments of merger remedies have taken place through two published reports by the Federal Trade Commission (FTC). The first, and likely the first of such studies by an authority, was a study of the FTC's divestiture processes in 1999. The FTC followed up with a second study in 2017. Given the procedures required in the US, the FTC were required to file notice of the intention to conduct both studies in the Federal Register for comment before commencing.

First study

The first study started in 1997 and considered 35 of the FTC's divestiture orders, which included the divestment of assets and licences, issued between 1990 and 1994. Before commencing the full study, a small pilot review was conducted which covered nine cases based predominantly on the input of the buyers of the relevant divested assets.

The methodology was predominantly a case study exercised and focused on conducting interviews with the purchasers of the divested assets (including licences) to understand whether the divestiture had been successful. The 35 orders related to 50 purchasers, of which 37 were interviewed as part of the study, and an additional eight merging parties and two third parties were also interviewed. The study was summarised in a final report of 50 pages which presents the findings and includes conclusions on the generally high success rate of divestments, as well as a series of learnings from the review which are translated into recommendations to improve future effectiveness. To protect the confidentiality of participants in the study, the identity of the case studies is anonymised in the final report, referring instead to firms by number. The study made several findings that resulted in tweaks to the remedies practices of the FTC, many of which aimed to address the informational and bargaining imbalance between the merging parties and the purchaser, which the case studies highlighted.

Second Study

In January 2017, the FTC published a second ex-post assessment of merger remedies, which built on the first study and expanded it to include all the FTC's merger orders between 2006 and 2012. In total, 89 orders were reviewed, covering a range of sectors and remedy types, although the majority were structural in nature.

As with the first study, the principal method for 50 of the orders was to conduct case studies using interviews and, once again, the FTC found impressive willingness to participate in the study. For example, the final report notes that over two-thirds of those contacted for interview agreed to participate, and this was even higher for merged firms and their competitors. 207 interviews were conducted. Unlike the first study however, the FTC sought to interview a higher number of competitors and customers for each case study. In addition, it also used its formal powers, under Section 6(b) orders, to collect sales data from market participants and estimate market shares. The stated aim of the case studies was also slightly broader than the first study, seeking to understand if the remedy itself had restored competition to the level it would have been absent the merger, rather than just if the divestment itself had worked.

In another difference with the first study, the FTC took a different approach for sectors where it believed it already had well established practice due to a high number of previous investigations and was therefore less likely to uncover substantial new information. For some sectors, rather than interviews, the FTC instead sent questionnaires to supplement the knowledge already held. In the pharmaceutical sector, which itself accounted for over a quarter of the total orders, the FTC based its findings on internal information and knowledge, supplemented with publicly available information where possible.

The 41-page report focused on the sectors assessed using case studies and supported the findings with the reviews in the other sectors. As with the first report, the results of the study are summarised into best practices, with the outcomes of specific case studies kept anonymous. Even though the study found that in general remedies set by the Commission were effective, a number of refinements to the Commission's practices were made followed the findings of the second study, including ensuring sufficient due diligence and the effective transfer of back-office functions.

Source: Federal Trade Commission (1999), A Study of the Commission's Divestiture Process, 1999, https://www.ftc.gov/sites/default/files/documents/reports/study-commissions-divestiture-process/divestiture_0.pdf; Federal Trade Commission (2017), The FTC's Merger Remedies 2006-2012: A Report of the Bureaus of Competition and Economics, January 2017, https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf

2.1.2. Ex-post assessments of subsets of merger remedies

Ex-post assessments of merger remedies can also be part of broader ex-post assessments of merger decisions more generally, where the study considers a number of merger cases, some of which include remedies. For example, in 2022, the Australian Competition and Consumer Commission (ACCC) published an ex-post study of mergers, which looked at six separate merger decisions made by the ACCC, one of which involved a remedy package (ACCC, 2022[24]). Another example can be seen from a 2009 review of merger decisions by Deloitte which was conducted on behalf of the UK Competition Authorities (Deloitte, 2009[25]).

There can also be studies which consider only one case. For example, in 2014, the OFT published an evaluation of its conditional clearance of a merger case involving retail fuel stations (Office of Fair Trading, 2014[26]). In contrary to the studies discussed above, the purpose of this evaluation was a bit broader than just understanding whether the merger remedy was effective. See Box 5 for a further description of this case.

Another example of an ex-post assessment of a single merger remedy comes from South Africa, where staff at the Competition Authority conducted an ex-post assessment of the remedies imposed on a merger between Walmart and Massmart (Mandiriza, Sithebe and Viljoen, 2016[27]). An interesting dimension of this assessment was that, in addition to competition issues, the remedy covered public interest concerns that the authority had during its original investigation.[12]

2.1.3. Focus on different types of remedies

A slight variation on these types of ex-post assessment of merger remedies, are studies which seek to understand if broad types of remedies are effective. For example, (Friberg and Romahn, 2015[28]) undertake analysis of past merger divestitures in the Swedish beer industry to understand if such divestitures are effective. The authors argue that the results demonstrate that such divestitures can be used to effectively restore competition. Similar work from (Tenn and Yun, 2011[29]) has assessed the effectiveness of divestitures in the context of a pharmaceutical transaction.

Another type of assessment that could be classified as an ex-post assessment of merger remedies are studies that reflect on the practice of an authority with regards to merger remedies, potentially focusing on one or two specific angles. These can include aspects of ex-post reflection, considering what has happened to understand the remedies effectiveness, but mainly analyse the approach that has been taken with respect to the relevant issue. In this sense, the ex-post aspects of these assessments are more limited. An example is a study of behavioural remedies by the French competition authority, which included consideration of mergers (Autorité de la Concurrence, 2019[30]), as well as a guide on merger remedies by the International Competition Network's Merger Working Group, which contains a number of case studies

of past merger remedies, albeit focusing on the contemporary decision rather than assessing them ex-post (ICN, 2016[31]).[13]

2.1.4. Broader studies containing links to merger remedies

Beyond studying a specific merger remedies itself, when mergers involve remedies, then the remedy can be viewed as part of the broader effects of merger control. Many studies consider broader matters than just merger remedies and are similar to the category of ex-post assessment that contemplate whether the merger decision itself was correct. Such assessments may seek to understand the effect of the merger remedy in the context of understanding the benefits of having merger control, as opposed to purely to derive lessons to improve future practice. For example, several studies have considered the implications of international transactions on merger control, many of which concern remedies. Such studies have often employed a case study approach, including looking at previous merger remedies, which assesses previous cases to understand what happened and if any lessons can be taken from it.[14] Similar reviews also cover broader reflections on the effectiveness of remedies and best practices, such as the books (Davies and Lyons, 2008[32]) and (Kwoka, 2015[33]).

Other types of study that have an element of ex-post assessment of merger remedies are studies that consider the evolution of competition in a particular sector, where mergers have taken place and remedies were used. Such studies typically seek to understand how the state of competition in the relevant markets via the evolution of prices and other metrics, rather than considering the remedies in detail themselves, although such studies can provide evidence of their general effectiveness, or otherwise. Examples include studies of the United States' petroleum market, such as (Karikari et al., 2007[34]) and (Silvia and Taylor, 2013[35]), the United States' Railroad sector in (Winston, Maheshri and Dennis, 2011[36]). Some studies also consider the nature of competition in the market and use models of competition to consider how effective different types of remedies might have been. For example, in the context of a hospital merger blocked in the United States, (Gowrisankaran, Nevo and Town, 2015[37]) estimate the appropriate pricing model for prices negotiated between hospitals and managed care organisations, and use this analysis to assess the potential effectiveness of alternative remedies.[15]

As can be seen, there are many different types of ex-post review of merger remedies. For all types, the idea is to better understand some element of merger remedies, whether that be if they work at all, how best to remedy specific situations, or even the minute detail on how to ensure they are effective. There are many types of lessons that can be learnt, and these can then help with future cases. Due to the overlap with other types of ex-post assessment, this background note focuses on ex-post assessments that consider merger remedies with the purpose of identifying lessons for future practice for competition authorities. This is, however, not to undermine the value of other types of review.

2.2. The case for performing ex-post assessment

As described in the previous section, ex-post assessments of merger remedies can come in many shapes and sizes. Having defined what they are, the next section sets out the case for doing such assessments, but also acknowledges some of the challenges (such as resource constraints).

Section D of the OECD Recommendation on Merger Review [OECD/LEGAL/0333] notes that member countries should review their merger laws and practices on a regular basis to seek improvement and convergence toward recognised best practices.[16] As appropriate, the OECD advocates the use of ex-post assessment of policy interventions as a means to improve their quality (OECD, 2016[8]).

As noted in the introduction, it is therefore important to get merger remedies right and, while ex-post assessments do not guarantee success, never reviewing past actions is unlikely to prove profitable. Considering whether past merger remedies have been effective provides an opportunity to demonstrate the

effectiveness of merger remedies in general, as well as insights to ensure they are as good as possible. They allow authorities to test whether any assumptions made at the time of the decision were valid, to improve their general knowledge about the efficacy of different tools, as well as improving overall decision making.

Ex-post assessment can also be quite flexible. The assessment that best suits an authority in each situation may depend on a range of factors, including areas identified as critical for success. For example, if a specialised mergers remedy team were introduced in recent years, it could be worth focusing an ex-post assessment on the process element of merger remedies to check that the new team is working well. On the other hand, if there has never been an assessment on whether past divestments are successful in a jurisdiction, a focused study of this could be illuminating.

In addition to providing insights to improve several aspects of merger remedy decision making and implementation, ex-post studies have the potential to improve stakeholder relations by allowing interactions with stakeholders outside of an active case. Ex-post assessments can also improve agency reputation, by demonstrating accountability and increased transparency, although it must be acknowledged that there are risks to short-term reputation if the findings of the review publicise errors. Nonetheless, openly striving to be accountable and improve practices is a positive message that can be communicated to stakeholders and will likely make the authority seem more transparent (OECD, 2023[38]).

The value of such studies is perhaps illustrated by those that have already completed them, with many examples of ex-post assessments of merger remedies highlighting their value. For example, in their merger remedies study, the Canadian Competition Bureau states (Competition Bureau Canada, 2011[21]):

"The remedies study has been of significant value in confirming that many of the Bureau's existing policies and procedures relating to the design and implementation of merger remedies are effective, and in identifying areas where such policies and procedures could be more effective. The Bureau intends to use the knowledge gained from the study in an update to the Remedies Bulletin, including the consent agreement template appended thereto."

Similarly, many of the other studies described in the section above have noted how the authority took on learnings from the study and found them useful. Perhaps the best example of this is from the United States, where the exercise was found to be sufficiently useful to repeat again as described in Box 2.

2.3. Challenges for ex-post assessments of merger remedies

Despite their numerous benefits, ex-post assessments of merger remedies must compete with other potential tasks within an authority, many of which will be considered core activities and potentially non-discretionary. In this context, the benefits of ex-post assessments of merger remedies must also be considered alongside their potential costs or disadvantages.

The most obvious cost is the implications that ex-post assessments have on authority's resources, whether internal resources or externally outsourced, although resource implications vary according to the scale and complexity of the review.

There will also be costs outside of the authority, such as the cost of the time given by stakeholders when participating in the study. It is difficult to put an estimate on these costs. However, as noted in Box 2, as part of its obligations, the US FTC was required to file notice in the Federal Register before commencing its studies. This included some estimates of the burden of the studies on external participants, which assumed of a cost of US$ 2,783 per participating firm, if two senior staff attended the interview with legal representation.[17] The exercise also estimated the cost of responding to brief questionnaires to purchasers at $1,490 and the cost for firms in providing relevant financial information at $750. As detailed in the next section, the number of interviews carried out can vary depending upon the complexity of the remedy being studied, and the ambitions of the project.

Another potential cost of such projects is that their success can be uncertain. A successful ex-post assessment of a merger remedy correctly identifies the answer to the research questions posed and can implement findings of require improvements. This could be to understand if divested businesses survive after a few years, or if the remedy itself was effective. Assessments require information, including data from parties involved in the process and/or market participants. In some circumstances, especially when there is a lack of information gathering powers, this information may be unavailable (see further discussion in the next section). It may also be impossible to get access to the original case team if they have already left the authority. These factors can lead to inconclusive ex-post assessments that are not able to provide robust insights.

Similarly, even if lessons are learnt, these are only of value if there is an ability to extrapolate them for future cases. If the lessons refer to a unique or rare event, they may be of limited value. There may be benefits of some lessons that can apply to other areas, but not all, and this may not derive benefits to the entity incurring the costs of the study.

There are other risks that can be associated with ex-post assessments of merger remedies that may result in costs. Such risks could be to the chance of a successful assessment, or to the authority more broadly. Many of these risks can be mitigated by effective methodologies and processes for the assessment, but some risk is likely to remain. For example, it can be difficult to separate ex-post assessment and re-opening enforcement, which could create reputational damage with stakeholders if they enter the process willingly and are surprised that information they provide leads to later action against them.

As noted in the above section, there can also be circumstances where authorities face awkward positions if they find that a previous decision has not worked as expected, leading to risks of short-term reputational harm. In some circumstances, perhaps due to a high-profile case or a complex political environment, the harm from these situations could be substantial. One mitigation for such a cost would be to consider conducting the review internally and limiting the amount of information that is published. This topic is discussed in more information in the section below.

3 How to conduct ex-post assessments of merger remedies

This section provides an overview of the different approaches to ex-post assessments of merger remedies. Unsurprisingly, given the wide nature in different types of assessment, as discussed in the previous chapter, methodologies depend on the type of study.

As seen in some of the examples described in the previous section, ex-post assessments of merger remedies do not need to be complex empirical exercises and can instead comprise qualitative elements. The overall purpose is to improve practice through understanding of past effectiveness, and this can be done in a number of ways. That a study is not all-encompassing does not make the ideas for better practice that emerge from them any worse, providing they are robust. There are, of course, many benefits to quantitative analysis, although these are not without their challenges.

This section is largely written from the perspective of a competition authority seeking to conduct an ex-post assessment of its own merger remedy cases. As noted in the previous section however, ex-post reviews can also be conducted by other entities, such as academics and much of the lessons could apply here.[18]

3.1. Purpose of the assessment

As with most exercises, at the beginning of any ex-post assessment of a merger remedy, it is necessary to identify the aim of the exercise. Answering this question will help the authority identify the best methodology and way forward.

From the discussion above on the previous types of studies, it is clear that a wide range of assessments are possible. Within ex-post assessments of merger remedies, perhaps the two most common questions to are:

- has the remedy proceeded as expected, for example with a successful divestment that is still active in the market; or
- has the remedy been successful in restoring competition to the levels it would have been absent the merger?

These questions are inseparable from the design and implementation of the remedy. The first is a factual question that does not seek to understand the impact of the remedy on competition directly, but instead to understand if the immediate expected results of it have been realised. The second is a broader test and requires a more thorough assessment of the market conditions that prevail. In practice, many reviews may seek to sit somewhere in between the two, focusing on the first question and at the same time seeking to understand whether competition has been restored, whilst acknowledging such a question will only be partially answered.

It can also be helpful in some circumstances to identify more specific questions for assessment. Such questions can be broad, such as wanting to understand how effective overall merger remedy practice has

been, or more specific, such as wishing to focus on the effectiveness of particular types of remedies. Identifying this purpose will lead the authority into selecting cases to study, as described in more detail below.

Beyond selecting cases, it can also be helpful to tailor questions for the specifics of different cases. For example, in the most recent set of ex-post case studies conducted by the CMA on merger remedies, as described in Box 3, the following questions are explicitly identified for a case study into a remedy with behavioural access requirements in the dairy sector (CMA, 2019[20]):

> *"The evaluation of this merger remedy has focused on two questions:*
>
> *(a) Has the remedy been effective in its aim of allowing the expansion of an existing player (Medina) into the market for supplying fresh milk to national multiples in the Severnside dairy catchment area?*
>
> *(b) Was the remedy too complex for it to be appropriate as an undertaking in lieu of a reference at Phase 1 other than in exceptional circumstances?"*[19]

This provides an example of how expectations, and what the authority currently thinks about the remedy, can help shape an ex-post assessment by focusing on areas of interest.

3.2. Selecting past remedies for assessment

Regardless of the type of ex-post assessment of merger remedies, the entity carrying out the assessment needs to identify the merger remedies to be included in the study. All else equal, the more cases considered the better, although this of course increases the size and complexity of the project. There is likely to be a trade-off between breadth and depth, with the ability to consider each merger remedy in detail diminishing as the number assessed increases.

One approach is to consider all relevant merger remedies over a set period.[20] With this approach, the appropriate timeframe to consider must be decided. This discussed further below.

Alternatively, a smaller set of merger remedies could be considered. Which to choose will likely depend on the type of ex-post assessment of merger remedies, as well as the number of relevant cases, resources and timing for the project. The more holistic the review, the more cases should be included within it. Conversely, the more in-depth and detailed each assessment aims to be, for example if it seeks to understand fully remedy effectiveness, then the more the assessment may require focussing on fewer cases.

In some instances, authorities have conducted ex-post assessments of small numbers of cases at a time but combined these efforts to form findings from a larger set of case studies. Box 3 describes such an approach as taken in the United Kingdom by the CMA (and its predecessor bodies).

Box 3. Multiple Case studies of merger remedies in the UK

In the UK, one of the CMA's predecessor bodies, the Competition Commission (CC), began the first set of merger remedy case studies in 2004, with the first report published in 2007. These case studies sought to evaluate past merger remedies with a view to improving future performance. Between 2007 and 2012, the CC conducted 11 case studies of merger remedies which were published in four separate tranches. As the CC oversaw the second phase of the UK merger regime, with the Office of Fair Trading (OFT) managing Phase 1, the first 11 merger decisions reviewed were all Phase 2 remedies.

Following the formation of the CMA, the studies continued, with seven additional case studies having been released at present across three additional tranches. These additional case studies were drawn from a mix of Phase 1 and Phase 2 merger remedies. The latest report from the CMA, published in 2019, seeks to build on all the case studies conducted as part of the program, updating the findings to draw on the lessons learnt across the spectrum of remedies reviewed. As well as a summary of the findings from each case study, which are named, the report contains information on the latest tranche of merger remedies that were reviewed, as well as an appendix containing information on the previous case studies.

Methodology

An interesting aspect of the CMA's (and previously CC's) approach is the purposeful selection of a range of different types of merger remedies to review, including those that are less commonly applied. The CMA notes that this means that the reviews contain a higher proportion of behavioural remedies and complex divestitures than seen in the underlying case history. In the mix of cases selected, the CMA also sought to include remedies that appeared to have been successful and those that were not, as well as a mix of complex and more straightforward cases.

The principal methodology for each case study consisted of interviews with key stakeholders, supplemented with a review of the original merger decision and case files. Several stakeholders were included in each case study, including CMA staff, the party subject to the remedy, as well as other customers and competitors, and other relevant stakeholders such as any trustees, alternative purchaser or relevant regulators and associations. Interviews were tailored to fit the profile of the stakeholder, but broadly sought to understand their views on the remedy, including the design and implementation, and reasons why it may have or may not have worked as expected. Formal invitation letters were sent to each stakeholder to explain the process and encourage participation.

Having conducted several tranches of case studies over a course of many years, the CMA notes in its most recent report that the methodology appears to be working well, and that stakeholders have shown a high level of willingness to participate in the process.

Source: CMA (2019), Merger remedy evaluations - Report on case study research, UK Competition & Markets Authority, https://www.gov.uk/government/publications/understanding-past-merger-remedies

If cases are being sampled, authorities will need to select cases for assessment. An important starting point in the selection process is to identify the purpose of the review, as this could have implications for the cases. Other factors to consider are:

- Timing – how long after the merger remedy implementation
- Data and information availability
- Other factors, such as sensitivities or ongoing enforcement, particular interest

Experience from other ex-post assessments shows that a mixture of timing is possible, with several assessing many cases over a significant period. Many of the studies looking at ex-post assessment of merger remedies consider cases decided between five and ten years after the decision (OECD, 2016[8]). As a minimum, ex-post assessments must wait until after the merger remedy has become effective, which may be some time after the relevant merger decision. In terms of ideal timing for ex-post assessment of merger remedies, it is advisable to leave sufficient time for market dynamics to stabilise following the remedy and for outcomes to adjust. On the other hand, leaving a review that seeks to untangle complex causal effects too long, will also increase the complexity. While the appropriate time will vary according to the sector and case, allowing a minimum period of around three years, and a maximum of ten, post implementation appears to be a good rule of thumb, although different timeframes need not necessarily preclude ex-post assessment.[21] For jurisdictions that have taken relatively fewer merger remedy decisions, which is most jurisdictions as noted in Box 1, a longer timeframe may be required for a larger study, and Box 4 provides more information on the Canadian study as an example of this.

As noted above, it is difficult to separate an ex-post assessment of the design of a merger remedy from an ex-post assessment of the merger remedy process. However, it could be possible for an authority to focus on process aspects with a small, and perhaps internal, exercise, for example by asking involved stakeholders for comments on the process. If the authority wished to conduct such an assessment that focused purely on the process, then there could be a preference to conduct the review sooner rather than later. This allows a better chance of retaining knowledge from the relevant case teams, and allowing time for markets to adjust may be less relevant. As seen by other projects from competition authorities, this does not mean there is no value in reviewing past work at a later date, as many relevant procedural aspects will be recorded and available to view later.

Box 4. Canadian Competition Bureau study

In 2011, the Canadian Competition Bureau (Bureau) completed an internal ex-post assessment of their merger remedies. In addition to a detailed internal write-up, the Bureau published a 15-page summary of the outcomes of their study. The purpose of the study was to identify whether the remedies had been effective in each case and whether there were observations that might aid the future approach to remedies.

The study considered a longer timeframe than the studies conducted in the US, EU or UK, considering all merger cases where remedies were implemented between 1995 and 2005. Cases after 2005 were excluded as the Bureau did not consider enough time had passed for those cases in order to properly evaluate the effectiveness of the remedy. Not all cases were able to be included in the study due to insufficient information being available, resulting in 23 cases being selected. The cases studied are listed in an appendix to the published summary.

For each remedy, the Bureau sought to contact the merged entity, customers, relevant purchasers and other market participants, such as industry associations. In total, 135 interviews were completed. As participation was voluntary, whether a case was ultimately included in the study relied on sufficient stakeholders being willing to provide information. To encourage participation, the Bureau provided confidentiality assurances to participants, and undertook not to use the information received for any purposes other than the study.

The study characterised remedies into structural remedies, quasi-structural remedies, combination remedies and stand-alone remedies. Given that there were fewer instances of the latter three, and that the lines between them were often unclear, the Bureau drew together summaries of its findings for structural remedies and then all other remedy types combined.

Source: Canadian Competition Bureau (2011), Competition Bureau Merger Remedies Study Summary, August 2011, https://ised-isde.canada.ca/site/competition-bureau-canada/en/how-we-foster-competition/education-and-outreach/publications/competition-bureau-merger-remedies-study-summary

One aspect to carefully consider with the timing of cases are appeal processes or litigation that might be ongoing, or a window of appeal that is still open. At the least, an ex-post assessment of a merger remedy will be greatly improved by the cooperation of the relevant merger parties, which would seem less likely to be given willingly, or at least constructively, if an appeal is being considered or ongoing.[22] At the extreme, the assessment could be completely tarnished by the appeal or even undermine the authority's chance of success. More generally, authorities should consider any other factors relating to likely stakeholder cooperation when deciding on including cases, such as the nature of previous interactions with them.

As described below, a key source of information will be the relevant merger parties and relevant market participants, including any divestment parties. The availability and likely engagement of these parties may therefore be a factor in deciding whether to select a remedy for review. For ex-post assessments involving quantitative elements, the availability of data will dictate what is possible. Understanding the data that is, or is likely to be available, will therefore be an important part of case selection for those types of ex-post assessment. Many of these techniques will rely on data collected from the original merger investigation. In some jurisdictions however, it may not be possible to use this data for a purpose other than that which it was initially intended for, and they may need to seek permission from the relevant stakeholder. From the examples of studies described elsewhere in the paper, several have removed cases from the study due to a lack of information, such as an insufficient number of stakeholders coming forward. Clearly, such an approach is less detrimental to the overall study, the greater the sample of cases assessed.

In some circumstances, there may be other factors that suggest including or excluding cases from assessment. Authorities may wish to include cases that are novel or include others to ensure a mix of circumstances. This was the approach taken by the CMA as explained in Box 3. On the other hand, some cases may have sensitivities that make conducting an assessment untimely. There could be ongoing litigation in the relevant market, or upcoming enforcement, which an assessment might jeopardise. More generally, there may be political sensitivity in some sectors, and this is more likely to be relevant if focusing on a smaller number of cases, as any findings from the study will be harder to generalise and be more specific. In some circumstances, it may be appropriate to conduct an assessment internally, or not at all, if the context is highly sensitive. See the section below on confidentiality for further discussion of relevant points in this regard.

Finally, for all ex-post assessments of merger remedies, authorities will need to know which remedy decisions they have made. While this is unlikely to be a problem for authorities with relatively few merger remedy decisions, identifying all relevant cases can represent a non-negligible informational hurdle for authorities with greater numbers of cases over a multi-year period. For this purpose, depending on the number of mergers with remedies, it is useful to have a database of past merger remedies, which provides information on past cases and some categorisation, such as the sector. Such a database can be prepared as a first step of the ex-post assessment and depending on upon the number of cases, could be a reasonably intensive task. An alternative is to ensure the collection of relevant data over time, such that the information stage is already complete.[23] Such an endeavour may be assisted by digitalisation, as authorities learn to input and retain data.

3.3. Conducting the study

3.3.1. In-house versus external

Ex-post assessments of merger remedies can be undertaken by an authority itself, or by outsourcing the work to an external provider.[24] It is worth noting that in general, most of the ex-post assessments that focus purely on the remedy aspect of a merger, avoiding the question of whether the original merger decision itself was correct, appear to have been conducted in-house.

There are some advantages to conducting such studies in-house. As the purpose is to understand how well the remedy process is working, an internal assessment may be better placed than an external party which may possess less information on how the process functions and have less access to the relevant staff members. On the other hand, staff with sufficient time and expertise are required if the work is to be conducted internally. Note however, that even if the work is outsourced, there is likely to be some demands on internal staffing as the work will require some form of supervision to ensure its satisfactory completion.

That most such assessments have been internal does not imply that they could not be undertaken externally, although being able to outsource the completion of an ex-post assessment requires the necessary budget, and appropriate procurement procedures. Outsourcing can allow the authorities to benefit from a truly independent perspective. This may be beneficial for encouraging third parties to engage with the work and can create a clearer line between the ex-post assessment and other activities, such as enforcement. This can be important when, as in most cases, there are no information gathering powers for ex-post assessments. Independence may also allow the external provider to provide frank feedback on past performance, allowing stronger and clearer lessons to be drawn from the work. In addition, an external provider may be able to draw on greater specialised expertise to conduct the work, particularly if the expertise is not normally required by the authority (such as advanced econometrics for example).

However, conducting the review internally may make it easier to use confidential information available from the time of the case, although in some circumstances this may also be possible with external providers using confidentiality undertakings. Internal case teams may also have a better understanding of the context for decisions, and therefore be better placed to offer constructive recommendations for improvement. The OECD guide to ex-post assessment contains more information on the different techniques available as well as some of their challenges (OECD, 2016[8]).

3.3.2. Involvement of original merger case teams

If conducting an ex-post assessment internally, an authority will have to decide how to resource the project. For many authorities, this matter will be a practical one, depending upon the availability of staff and the structure of the agencies.

However, one issue worthy of consideration is whether to involve the staff members who took an active part in the original merger investigation that led to the remedy. Further, if there is to be some involvement, it must decide in which form it should take. Should members of the original case team lead the investigation, or provide advice, perhaps through early briefings?

There are a number of potential advantages in including members of the original case teams on ex-post assessments of merger remedies, not least being able to benefit from their knowledge of the sector. This can mean a more efficient review as less time is required to gain relevant expertise and case teams may also benefit from pre-established relations with relevant stakeholders. On the other hand, there may be a risk that the original case team suffers from a bias towards confirming expectations at the time of the decision, and at the very least is likely to be perceived to do so. It is likely that this risk can be mitigated to some extent by ensuring independent influence on the ex-post assessment.

A mix of practices can be seen from past ex-post assessments of merger remedies. Some, such as the second FTC study described in Box 2, have actively sought to use the experience of previous case teams to ensure an efficient study. In other examples, a separate unit has been charged with conducting most of the work for the ex-post assessment, such as that of the CMA described in Box 3. However, in both cases as well as in other examples seen, studies seek to maintain a level of scrutiny from a source independent of the case team, whilst also using internal knowledge as efficiently as possible.

Finally, the type of ex-post assessment will clearly be a factor when deciding how to staff a study, and this could influence whether the original case team will be well-placed to assist. If the study will be largely interview based, this could be well suited to the skillset of those who conducted the original investigation,

whereas the more quantitative or specialised the methodology to be employed, the greater the likelihood for outside specialists.

3.4. Methodological issues and information gathering

The methodology for the ex-post assessment needs to be carefully aligned with the review's objectives. The section below sets out some of the main issues to consider and identifies some of the main options.

There are several methods available for gathering information from stakeholders, and a mix of these can be employed. For example, information requests can be used to gather information and basic data points. These can be supplemented, or succeeded by, interviews with the relevant stakeholders. Different approaches may work better for different types of stakeholders. If possible, pilot exercises can be useful before beginning larger data collections, allowing the authority to test the approach on a smaller selection of stakeholders.

For most jurisdictions, it is unlikely that they will possess the necessary powers to compel the provision of information or attendance at an interview for the purposes of the ex-post assessment, as these do not themselves relate to an investigation. Even if such powers do exist, it may be that they are burdensome to use and best avoided.

This need not act as a disincentive to conduct ex-post assessments of merger remedies. Most of the studies that have been conducted to date have relied on the voluntary participation from stakeholders yet have been able to deliver meaningful studies. Indeed, one of the few examples of compulsory information powers being used in an ex-post assessment by the FTC as described in Box 2, where Section 6(b) orders were used to gather information. However, even in this case, participation in interviews, which were at the heart of the study, was voluntary.

It is important that participants are encouraged to participate in the study and have confidence in the relevant processes. Keeping their information confidential will be an important part of this, and this issue is discussed further in a section below.

3.4.1. Issues for broader ex-post assessments of mergers involving remedies

While not the focus of the paper, broader ex-post assessments of merger decisions can also focus on the appropriateness of the merger remedy in the first place. For these reviews, the aim of the exercise is twofold:

- Understand if the correct decision was reached with the merger.
- Consider whether the remedy chosen was effective.

Identifying whether the correct decision was made with a merger is not straight-forward. More detail is provided in (OECD, 2016[8]), but there are two ways in which the incorrect decision may have been taken. Firstly, a decision may have resulted in a remedy, but ex-post assessment suggests this was in fact not required as there were not competition issues in the first place, sometimes referred to a Type I error. Secondly, there may have been competition issues, or more severe competition issues than were identified in the case, such that further remedies might have been required, akin to a Type II error. This latter is subtly different from designing an appropriate remedy, and instead considers that additional competition problems occur, such as in an additional product or geographic market for example.

Of these, intuitively, the second appears to be the easier question to answer. Both issues rely on the identification of the counterfactual: what would have happened absent the merger and subsequent remedy. In the case of the second question, the relevant element of the merger was allowed to proceed whereas, for the former, the remedy was put in place to prevent the identified potential competition issues being

realised. Thus, from an ex-post perspective, identifying a counterfactual appears at least notionally harder. This is not to say that comparing before a merger and after will always be appropriate; many factors can influence how markets evolve.

In determining whether the choice of remedy was effective, there could be seen to be two questions to consider:

- Was the chosen remedy effective?
- If not, would an alternative remedy have been more effective, or would prohibition be the only feasible option?

As merger remedies seek to preserve competition that is expected to be lost from a merger, the remedy will be effective if this is the case. If competition is lost, it will not, with ineffectiveness being both a binary concept, if competition is not preserved, as well a question of degrees, with different levels of lost competition possible. In this sense, a natural counterfactual is to compare competition prior to the merger with that which results from the merger.

Identifying if alternative merger remedies would have been effective is a particularly challenging task, and not something directly observable ex-post.[25] At times, it may be sufficient to understand that different types of remedy are not effective in some circumstances, as this provides a useful indication that a different approach is required next time. Showing that a remedy is effective does not preclude that other remedies could have not achieved the same results.

3.4.2. Qualitative sources

Qualitative information sources are important for almost all types of ex-post assessment of merger remedies. Experience from other ex-post assessments of merger remedies indicates that gathering information from stakeholders is likely to be an important part of the process, and indeed can be the primary source of information. In addition to stakeholders, the assessment will need to carefully review the relevant documents from the original decision and conduct some desk research into the relevant market to understand the current state of competition as much as possible.

Depending on the scope of the assessment, authorities may wish to interview, or gather information from, a wide range of stakeholders, listed below in a suggested order of importance:[26]

- Parties to the remedy, such as purchasers of divested assets, licensees, beneficiaries of behavioural terms
- Merging parties
- Monitoring or divestiture trustees
- Market participants, in particular customers and competitors, but also suppliers and industry associations

The parties involved in the merger and remedy will almost certainly be vital to the ex-post assessment. The appropriateness of contacting other stakeholders will depend on the scope of the study and the resources available. At the least, it is likely to be advisable to contact some independent market participants (such as customers if possible, or rival firms) to understand their perspectives on how the remedy has impacted outcomes. Studies should identify as early as possible the stakeholders they will want to contact, and the information to collect from them.

The number of interviews required will depend upon the scope of the ex-post assessment. Based on the published reports of other ex-post assessments conducted, on average just under four stakeholder interviews are conducted for each merger remedy case considered, although this ranges from 1.3 to 5.9.[27] Conducting more interviews will likely improve the robustness and depth of findings, but it is also clear from experience that insights can be derived from a relatively small number of interviews.[28]

Good practice for interviews is to ensure a sufficient level of preparation. This could include preparing questionnaires in advance, which identifies the questions from which to seek answers, or, at the very least, a topic guide which acts as a prompt for the discussion.

Beyond interviews, surveys can prove inexpensive ways to gather substantial amounts of information from many different stakeholders, particularly if online. In some instances, these could prove useful for ex-post assessments. For example, in their study of merger remedies, the Italian Competition Authority used an online survey to gather information from relevant stakeholders. Indeed, it is worth noting that this was the first time that the authority had used surveys in this way, highlighting the opportunity that such assessments provide to try different methodologies outside of a litigation environment, where the costs of failure would be substantial.

3.4.3. Quantitative methodologies

All evidence that can support the robustness of findings from an ex-post assessment is welcome, and quantitative methods provide a substantial potential to provide this support. The potential for objectivity and measurement can provide insight and clarity beyond that possible from stakeholder interviews. However, quantitative methods can be complex and are reliant on data availability. As the numerous examples cited in this paper show, authorities have been able to produce insightful ex-post assessments to aid their future work without the need of much, or any, quantitative methods.

Nonetheless, where available, a number of simple quantitative sources can support the findings of ex-post assessments of merger remedies, even if the methodology itself remains largely qualitative. This could include sales or volume data collected from market participants, to be used to construct market share information to better understand whether competition has been truly restored by the remedy. See the example of the second FTC study as described in Box 2.

A range of quantitative techniques are potentially available depending upon the scope of the ex-post assessment, from simpler to more complex. These techniques are described in detail in (OECD, 2016[8]) and therefore this section does not provide further information on their use, especially given that most ex-post assessments of merger remedies have been more qualitative in nature.

However, as a general point, data availability and circumstance will determine what makes sense for a given assessment. Quantitative analysis of merger remedies requires an assessment of the counterfactual – what would have happened if the remedy had not occurred, which may not be easy to identify.[29] Under certain circumstances, natural experiments may provide the ability to better identify the effects of different remedies on the same competition problem. For example, difference-in-difference econometric techniques can provide attractive methods to estimate the effects of mergers, by exploiting the progression of relevant indicators in similar groups, but absent the intervention, here a merger remedy. Box 5 provides an example of this technique in the context of an ex-post assessment of a merger remedy.

Box 5. Example of difference-in-difference techniques for ex-post assessment merger remedies

In March 2014, the UK Office of Fair Trading (OFT) published an ex-post evaluation of its conditional clearance of the Shell – Rontec merger. The purpose of the work was to evaluate the OFT's decision. The original merger involved Shell's completed acquisition of several petrol forecourts – retail fuel or gas stations – from Rontec. Having opened an investigation into the acquisition, the OFT ultimately cleared the transaction on the basis that Shell would divest 12 of the acquired stations, as local competition issues had been identified in those areas.

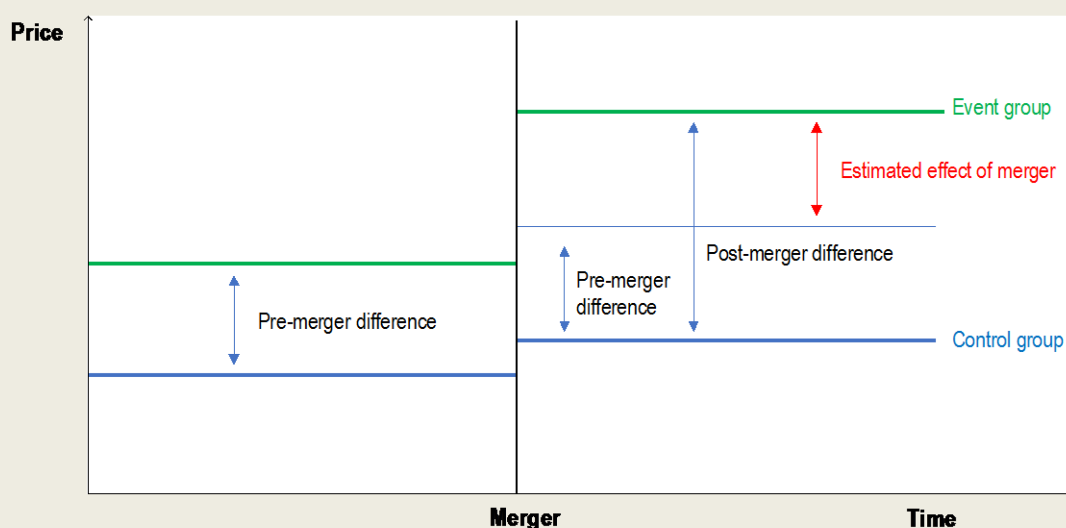
Due to the voluntary nature of the UK's merger regime, the merger had already completed prior to the initiation of the investigation. This allowed a rare opportunity for an ex-post assessment to observe how the market developed after the merger but without the remedy. While only for a limited time, this provided a unique insight into the counterfactual for the assessment, namely what would have occurred absent the remedy.

To evaluate the impact of the decision, the difference-in-difference methodology was used, focusing on two of the fuels where there was sufficient pricing data, petrol and diesel. This method allowed for data on prices from separate groups to be compared. The approach used the following steps:

1. Calculate the difference in prices for areas where competition issues were identified before and after the merger (event group).
2. Calculate the same difference for a number of areas which were unaffected by the merger (the control group).
3. Compare the difference between the two.

By removing this second difference, the approach seeks to identify changes in price that can be attributed to the merger, as the assumption is that other factors that may have influenced changes in prices, such as wholesale oil prices or general demand factors, will be seen in the difference of the control group. Hence, by removing that difference from the change of prices in the relevant area, the effect of the merger is isolated. This assumes that all relevant external factors affect the control and effect group identically.

Figure 1. Illustration of difference-in-difference approach



Source: Adapted from Office of Fair Trading (2014[26]), Shell – Rontec: An evaluation of the OFT's conditional clearance of the merger, March 2014.

The analysis found that for petrol prices had increased following the merger in the areas identified as having competition problems, then decreased following the divestment, suggesting that both the finding of competition issues was correct, and the divestment successful. The picture was less clearcut for the diesel fuels.

Note: In April 2014, the CMA came into existence, taking over responsibility from its two predecessor bodies, the OFT and the Competition Commission (CC).
Source: Office of Fair Trading (2014), Shell – Rontec: An evaluation of the OFT's conditional clearance of the merger, March 2014, https://webarchive.nationalarchives.gov.uk/ukgwa/20140402180350mp_/http://www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/OFT1525.pdf

3.4.4. Drawing findings from the assessment

The purpose of most ex-post assessments will be to study past merger remedies to understand their effectiveness. As in many other cases, lessons will often, but not exclusively, be derived best from the situations where there are reasons to consider the remedies to have been less effective than desired.

This then opens the question of why this occurred and, crucially, whether a general lesson can be derived from the experience. To draw these findings, assessments need to understand what drove the events that unfolded.

Remedies can be less effective than desired for a wide range of reasons, some of which will be highly specific to the situation. It may be difficult to know if what happened truly represents an underlying pattern or just a “one off”. Other merger remedies may be less effective than hoped due to reasons that appear multifaceted and complex. In these situations, it may not be possible to identify general lessons to improve the effectiveness of future merger remedies. Even in such circumstances, there can be value in noting the circumstances and practices that led to the observed outcomes, as combined with future experience may provide greater understanding of the underlying causes.

In general, the larger the sample size of merger remedies considered, the easier it will be to derive general lessons. Such lessons can also be viewed with higher levels of confidence than those derived from fewer cases.

3.4.5. Communicating the findings of the study

When conducting an ex-post assessment of merger remedies, authorities should decide on their approach to communication. In general, authorities are likely to want to be transparent about the fact that they are conducting the review, and to make at least some results publicly available.

There are some risks in this approach. The first is reputational, for example if the study finds that decisions have turned out to be ineffective with hindsight. Ultimately this is the exercise of ex-post, and while each authority will need to decide how best to manage this risk given its circumstances, being transparent and openly accountable for past decisions demonstrates a desire to improve for the future. Another risk is that specific cases are highlighted, which can create uncertainty for the business and also pressure on specific individuals within the authority, if they are considered to have erred. Such an atmosphere might chill enthusiasm for ex-post assessments of merger remedies all together. One approach to mitigate this, is to keep the reporting of the outcomes of the study high-level, focusing on the themes that emerge rather than specific cases *per se* (see Box 6 below).

Between publishing a full report and publishing nothing at all, several options exist for authorities. These include releasing information through other means, such as webinars or conferences, or publishing short press releases. For example, the Italian competition authority communicated the results of its ex-post assessment of merger remedies using a webinar format, rather than a full report.[30]

As discussed below, one aspect to consider in communicating the results of the review is the need to preserve the confidentiality of sensitive information.

3.4.6. Confidentiality of information

Many authorities are used to handling confidential information, and the issue will also be relevant for ex-post assessments of merger remedies.

Confidential information can create difficulties in publishing reports. Several techniques exist to manage this. Firstly, the information can be redacted from public versions, for example by replacing it with square brackets or blocked with solid ink. This means that certain elements will be lost for some readers or the report, but the details can be maintained for trusted parties (such an internal readers). Many authorities will be familiar with this approach from writing decisions. Secondly, reporting can be aggregated, or summarised, such that information provided is at a higher level than can be considered confidential. This allows the material to be most accessible to those who are unable to see the confidential information but may reduce the level of detail for internal viewers.

As the purpose of these studies is usually to identify general lessons, rather than to highlight specific outcomes involving named parties, some previous examples of ex-post assessments of merger remedies have chosen to keep the cases reviewed in anonymous form. Box 6 shows how the European Commission dealt with such an issue in its public version of its merger remedy study.

Box 6. European Commission merger remedy study

Following on from the FTC's first study into merger remedies, the European Commission released the public version of its own Merger Remedies Study in 2005, which was 233 pages including annexes.

The study analysed 40 merger decisions with remedies between 1996 to 2000, which accounted for 44% of the total merger remedy decisions over that period. The decisions were selected to be representative of the underlying decision base with respect to the type of remedy, the phase of investigation (i.e., whether Phase I or Phase II) and the relevant industrial sector. Due to limited market information, within the decisions chosen, around three-quarters of the relevant remedies were assessed, resulting in 96 remedies being studied.

In total, 145 interviews were conducted with relevant stakeholders directly involved in the remedy, such as the merging parties, purchasing entities or other beneficiaries and trustees, with limited interactions with other market participants like competitors or customers. The interviews were supported by tailored questionnaires which were piloted on nine cases before being fully launched. The questionnaires contained around 120 questions, and interviews lasted between one to three hours. The process was voluntary, but the Commission found that most stakeholders were forthcoming. Examples of the questionnaires used by the Commission are contained as annexes to the published report. The study was supplemented with quantitative economic data supplied by relevant stakeholders for some of the cases.

Confidentiality

The published report was a non-confidential version of an underlying document that contained confidential information. The public version included anonymised case descriptions, which removed all details that would allow the reader to identify the case. The non-public version would contain this information to maintain internal knowledge. In addition to the non-public version, the Commission also has access to an internal report on each of the assessments of each individual decision assessed.

At the beginning of the process, the Commission sent each relevant stakeholder a letter which introduced the project and provided assurance that their information would remain confidential. In particular, the letter said the following:

> *"We plan to publish the general findings of our study after the interview phase in a suitable non-confidential format which would entirely respect the anonymity of the participating companies and their business secrets. Thus, all business secrets you might convey to the Commission in the course of this study will be covered by the obligation of professional secrecy the Commission is bound to by virtue of the EC Treaty and of the Merger Regulation."*

Source: European Commission (2005), Merger Remedies Study, DG Competition, European Commission, https://ec.europa.eu/competition/mergers/legislation/remedies_study.pdf.

As discussed above, if there are no formal powers to compel the provision of information, then it is important to take all possible steps to encourage stakeholders to participate in the review. As with business as usual, it is important that authorities have processes in place to identify potentially confidential information and treat it accordingly. Relevant summaries of these policies can then be communicated to stakeholders to provide reassurance that their information will be treated appropriately.

3.4.7. Implementing findings

As noted in the section above on challenges, there is little value in conducting ex-post assessments of merger remedies if any lessons learnt from the process are not implemented into future practice.

Publishing a report or making one available internally is a first step to allowing the lessons to be learnt. However, it may be appropriate to supplement this with internal seminars or workshops so that staff working on merger remedies are aware. This is particularly important if the study was conducted by a different team than those who usually work on merger remedies.

More formal processes may also be valuable. These could include internal reviews which build in committed checkpoints that allow those overseeing the process to check on progress towards implementing lessons, such as within a year post-study or at six-month junctures. This can be a helpful mechanism to ensure that the findings are not forgotten in the face of more pressing matters, such as ongoing cases.

Another option is to update documents that provide guidance on the merger remedy process. Such guidance can be in the form of internal documents that assist staff in getting up to speed on a task or provide a reference point to ensure consistency. Such staff handbooks can be living documents or published periodically, and if they exist it is wise to update them following an ex-post assessment.

Authorities may wish to update, or publish if currently non-existent, guidance for external parties on merger remedies following a review. Such an act not only provides up to date guidance for outside stakeholders on how merger remedies will work from now on, but it also signifies a formal adoption of the lessons that have emerged from the review.

4 Interaction with other ex-post remedy actions

There are several aspects of merger remedies which could be considered to occur ex-post, if counting from the time of the decision. In some circumstances, in particular if there are ongoing behavioural remedies, an ex-post assessment of the merger remedy could take place while the remedy continues to take effect. This section considers such aspects of merger remedies, and how these link to ex-post assessments of them.

4.1. Ex-post assessments, compliance and planning ahead

An important aspect of merger remedy implementation is that the firms in question comply with the requirements. This is true for merger remedies in general, although compliance can take substantially different forms for different types of remedies.

In the case of divestitures for example, compliance is typically a crucial but short-term aspect of the remedy, needed to ensure that the divestiture is completed to the satisfaction of the authority. In other cases, notably remedies involving behavioural aspects, compliance can be ongoing. In such circumstances, monitoring the remedy and ensuring compliance could continue for some time after the merger remedy decision, and potentially occur parallel to an ex-post assessment of that merger remedy.

This risks issues if there is confusion between the actions of the authority in relation to the two separate activities and may affect the willingness of external parties to participate in what might be seen as another process with the competition authority. It can also lead to tensions if information supplied as part of compliance has the risk of being used, or might be perceived to be used, as part of the ex-post assessment, for example if it is confidential.

As with all areas of merger remedies, ex-post assessments can provide substantial opportunities to learn about the effectiveness of compliance mechanisms. Generally, however, it is advisable to keep the two processes separate to the extent possible. One is a formal process as part of the implementation of remedies, the other is an ex-post assessment likely conducted largely for the purpose of improving future work. That said, there may be opportunities to reduce duplication in some circumstances. For example, if an authority is in regular contact with a firm as part of compliance, this may provide a useful mechanism from which to gather information and use it efficiently for more than one purpose, including to learn about the effectiveness of the remedies in question. Care is however required.

Further, compliance mechanisms can contain reporting aspects which put obligations on firms to do certain things, including maintain or report data. It may be feasible that such mechanisms could be designed with an ex-post assessment of the remedy already in consideration, to ease the burden of such an exercise in the future. For example, it could be that the firms subject to the remedy are required to provide sales or volume data, or other metrics that could indicate the effectiveness of competition, such as pricing or switching data.

In general, forward planning of ex-post assessments of merger remedies may be beneficial for authorities to consider. While such exercises run the risk of imposing burdens on firms, the increased certainty from knowing a review is coming, and time to prepare a system for relevant data collection, may not be substantially more burdensome that having to deal with an *ad-hoc* request.[31]

4.2. Appropriateness reviews

Another type of assessment that considers merger remedies ex-post, but with a slightly different focus, are reviews that consider whether the remedies in question remain appropriate.[32] Unlike other types of ex-post assessment, these reviews seek to understand whether changes should be made to the remedy that is currently in place. They are generally relevant to behavioural merger remedies which impose conditions on the merging parties which last over time. In such circumstances, these reviews seek to understand if the conditions remain appropriate. The reviews may be initiated by competition authorities but are more likely to be initiated after a request from the party subject to the behavioural remedies.[33] This is particularly likely to be the case if the remedies did not include sunset clause provisions.[34] This process can be an important part of removing unnecessary restrictions on businesses and taking unwanted material off the authorities' books.

As mentioned above, the CMA is an authority that conducts systematic reviews of existing merger remedies. These reviews were initiated in 2015 with the aim of revisiting remedies that are in place to ensure they remain appropriate and to remove any that are no longer necessary or, at worst, may now be distorting competition. As of 2019, the CMA had reviewed 99 previous merger remedies, with 72 being removed (CMA, 2019[39]). In their report on ex-post assessment of merger remedies, described in Box 3, the CMA notes that such reviews are also able to provide lessons, noting that:

> *"The lessons learned from these reviews – for example, the increasing likelihood that behavioural remedies will become mis-specified over time – have similarly informed our policy and guidance."*[35]

If such reviews are undertaken, it is worth considering the potential interaction with an ex-post assessment. For example, in undertaking an assessment of whether the remedy remains appropriate, an opportunity may present itself in some circumstances to understand if other lessons might be learnt. Whether this is possible or advisable will depend on the circumstances, including whether it can be done without distracting from any obligation held to review the appropriateness of the remedy. Nonetheless, it is perhaps worth considering if such circumstances provide an efficient opportunity for lessons if possible. Of course, in general, such reviews are likely to take place a substantial period after the remedy is implemented, making obtaining meaningful lessons difficult.

Finally, even if provisions such as this do not exist, authorities may find themselves open to questioning from those subject to remedies along these lines if they embark on an ex-post assessment of that remedy. Firms subject to conditions may note that, in response to requests to be interviewed, that the remedies in question are no longer in force. Such requests should be dealt with through the usual process, and beyond the potentially efficient use of resources, kept separate from the task of the ex-post assessment.

4.3. Ex-post evaluation and broader competition issues

Generally, all exercises where authorities consider a sector can provide intelligence to inform future work, whether enforcement or advocacy. As such, ex-post assessments of all types, including those of merger remedies, may highlight issues that are relevant to other enforcement areas. For example, a study may discover that a remedy has proven ineffective due to a market structure or conduct issue, such as a previously unknown cartel.

While the information gathered from such a study will likely be specific to the sector that was already assessed as part of the original merger decision, the ability to gather intelligence in this way can be seen as an additional benefit of ex-post assessments of merger remedies.

If potential competition issues are identified through ex-post assessments of merger remedies, such as potential unlawful conduct, then enforcement or advocacy efforts can follow. Authorities may need to carefully consider the timing of any publication of the ex-post assessment if it risks undermining future enforcement, especially if it may tip-off the relevant parties (for example ahead of an upcoming dawn raid). Further, while this is not the purpose of the review, it may be beneficial to be clear with stakeholders that the authority can still act on information it receives.

However, this must be balanced against the risk of undermining ex-post assessment if the studies are seen purely as “fishing exercises”. To illustrate this point, the Canadian Competition Bureau noted in relation to its merger remedy study that, in addition to providing confidentiality assurances to participants, it would only use information provided to assess the effectiveness of past merger remedies (Competition Bureau Canada, 2011[21]). It is unclear whether this promise was put to the test, and what the Bureau would have done if it had received clear evidence of unlawful activity, but it does seek to highlight the tension that authorities without compulsory information gathering powers will face when seeking to gather information. It is perhaps worth highlighting once again that, from the various experiences considered in this paper, most authorities have found stakeholders willing to participate in the exercise.

Finally, it is worth noting that in some circumstances, particularly if the merger remedy has not been found to be successful, the authority may find itself with a desire, or under pressure, to consider relitigating or challenging the merger again. While powers to do so may not exist, discussion of such issues has become increasingly prominent in the field of competition (OECD, 2022[12]). As noted previously, in any event, the value of the ex-post assessment is mainly to ensure best practice, including learning lessons from any past mistakes and showing a willingness to do so is likely to win an authority praise. Being clear about the purpose of the assessment in all communication will assist in this regard.

5 Selected lessons from previous studies

Throughout the course of this paper, numerous references have been made to different ex-post assessments of merger remedies. The nature of ex-post assessment is that the best lessons often occur when things have not developed as expected, or as the authority intended. While such 'mistakes' are never desirable, this does however present an opportunity for identifying the reasons for them with a view to preventing them from happening again.

While many of these lessons will relate to the specific circumstances of the jurisdiction and their cases, it may be that common best practices can emerge from the experience of others. As such, while there will be value in each jurisdiction undertaking an assessment of their own specific practices after the fact to review their effectiveness, this does not preclude the value in considering the outcomes of the ex-post assessments of others.

In this final section, selected lessons from those studies are presented. This is not intended to be a standalone guide for best practice on merger remedies, as there are numerous, exhaustive points of reference for this, such as (OECD, 2003[9]), (OECD, 2011[10]) or (ICN, 2016[31]), as well as the guidelines produced by competition authorities themselves. Instead, the purpose is to illustrate the types of lessons that can be identified from such studies and, hopefully, serve as further motivation to conduct them.

5.1. Remedies appear to work often and are usually effective

Several of the ex-post assessments conducted by competition authorities have sought to assess the success of their merger remedies at a high level, in particular the studies from the United States and the European Commission. Both were large studies as described above and both note that they have not conducted full ex-post evaluations of the success of the remedies for each case, but instead have used the evidence collected to form a judgement on whether the remedy was successful or not.

In general, the results of these assessments suggest that the remedies were successful in most cases, but also that in a non-negligible minority of cases the success was qualified or, indeed, the remedy was a failure. By categorising the types of remedy, the analysis also allows the authorities to consider how success varies for each type, and perhaps where to focus any future improvements.

The second FTC study and the European Commission study also both sought to understand whether concerns or issues had been raised through the process, and how this related to the likelihood of success. Unsurprisingly, the results suggest an increased chance of success when no process concerns, or design or implementation issues, were raised by stakeholders in relation to that remedy. For example, from the second FTC study, Table 1 illustrates how the chance of success of the remedy related to whether process concerns were raised.

Table 1. Remedy outcomes and process concerns from second FTC Merger Remedies Study

	Success	Qualified Success	Failure
No Process Concerns	78%	7%	15%
Process Concerns	56%	24%	20%

Note: Adapted by OECD from Table 6 of the FTC report
Source: Federal Trade Commission, The FTC's Merger Remedies 2006-2012: A Report of the Bureaus of Competition and Economics, January 2017,https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf

Such a result is perhaps not unexpected but may further strengthen the case to conduct ex-post assessments of merger remedies to understand if process concerns or other issues may be undermining the chance of a successful remedy in each jurisdiction. Similarly, Table 2 is taken from the EU merger remedy study, which once again shows that while most remedies are successful, there can be room to learn lessons for future improvement.

Table 2. Effectiveness of remedies analysed in European Commission Merger Remedies Study

	Effective	Partially Effective	Ineffective	Unclear
Percentage of merger remedies	57%	24%	7%	12%

Note: Adapted by OECD from Chart 37 of the European Commission's Remedies report. Based on 85 remedies analysed.
Source: European Commission (2005), Merger Remedies Study, DG Competition, European Commission, https://ec.europa.eu/competition/mergers/legislation/remedies_study.pdf.

5.2. Structural divestitures still need to be implemented with care

While preferred by many over behavioural remedies in most circumstances, this is not to say that structural remedies are guaranteed to be effective. As noted above, the experience from ex-post assessment of merger remedies shows that success is not guaranteed, even if a structural remedy is in place. Ensuring their effective implementation requires careful procedures and process, including tailoring to the specifics of the case.

Almost all previous studies referred to in this paper have revealed some aspects of best practice from studying past structural divestments, either because they identified a practice that appeared to have been successful, or an issue that likely led to ineffectiveness. The section below introduces just a few of these points.

5.2.1. Importance of maintaining the assets

An undeniably important part of a successful divestment remedy is that the assets being purchased must be sufficient to allow the new purchaser to restore competition. As well as the assets chosen to be divested, maintaining those assets such that they continue to provide the potential for robust competition is a key aspect of this.

Doing so will not always be easy, not least given that the firm divesting the assets may have an incentive to weaken future competitors to the extent it can. In such circumstances, there appears to have been value for authorities in understanding how their processes and procedures have succeeded in overcoming this obstacle. Many lessons appear to have been learnt in this regard.

For example, the risks of not having a divestment monitor or trustee in terms of asset degradation has been noted in several studies, including as noted in the Canadian study. Further, the appointment of the monitor is not something to be taken lightly and will often require careful thought. For example, the CMA's study highlighted the successful approach of carefully identifying the skills needed for the trustee, which will be case specific. Similar issues have also been raised in other studies, including that of the Italian competition authority, which noted the preservation of asset value as one of several things to consider in its public presentation of the results.

5.2.2. Selecting the right purchaser

As well as ensuring the assets to be divested are appropriate, it is vital that a suitable purchaser is chosen for the divestment package. This includes ensuring that the purchaser has the necessary ability and incentive to run the business effectively, including from a financial and expertise perspective.

Several studies have been able to hone their best practices thanks to ex-post assessments when it comes to selecting a purchaser. These lessons extend beyond a general acknowledgement of the importance of carefully selecting the purchaser, into identifying the types of information sources required. In some instances, learning after the fact that a purchaser has not been as successful as expected can provide an opportunity to ask why, and whether such a circumstance can be prevented next time.

For example, one lesson that has emerged from several studies is the importance of ensuring the purchaser has adequate financing to be a success. This has flowed from observing the opposite effect in some previous cases, where purchasers of divested assets have not been able to exert as strong a competitive constraint as expected due to limits on their finances. Upon reflection, the ex-post assessment identified that the financial capabilities of the purchasing firm may have been clearer if there had been considered in greater detail at the time of the original decision. This provides a lesson that can be incorporated into future practice.

As an illustration, the second FTC study notes as recommendation for future practice that, when considering a buyer, staff should carefully identify the sources of financing of that purchaser to verify that it is sufficient. Similarly, the CMA study identifies a lesson from its case study analysis that it is important to ensure that there is some form of financial "stress test" of potential purchasers to ensure their viability.

5.3. Making behavioural remedies work

While perhaps not the preferred choice of remedy in many cases, in some circumstances behavioural remedies may be the most appropriate choice. Ex-post assessments of merger remedies suggest that these remedies can be effective if implemented correctly, although will need to overcome several potential obstacles.

Many of the lessons learnt from ex-post assessment of behavioural remedies are from cases where things did not work as hoped, but this is not always the case. Best practice can also come from understanding when things have worked. There are many examples of tweaks to practice that flow from ex-post studies in relation to behavioural remedies. The section below highlights a small selection to illustrate these points.

5.3.1. Importance of testing behavioural remedies

Behavioural remedies are often, by definition, specific to the circumstances. As such, it can be particularly difficult for competition authorities to predict how they will work in the future, and their complexity and uncertainty can raise risks. These points are raised in several of the studies, including the Canadian Bureau and CMA studies.

One practice that is identified as important is to carefully market test the remedies with stakeholders to assess their likelihood of success and identify potential shortcomings. For example, in its report focusing on behavioural remedies, the French competition authority highlights the importance of this testing in its previous practice, including several nuances based on its experience. This includes having to sometimes manage a delicate trade-off between not revealing confidential information contained within the remedy, but at the same time providing market participants with sufficient information to engage with the process.

5.3.2. Ensure effective monitoring

Given the nature of behavioural remedies, ensuring they continue to be effectively monitored has been identified as important from previous ex-post studies, including those of the French competition authority, the CMA, the Canadian Bureau's, to name just a few.

As well as having a monitor in place, the studies also identify that this monitoring must be effective, and that effective monitoring is likely to depend on the specifics of the case.

For example, in the CMA case studies, the CMA highlights the value of keeping behavioural remedies under review even in scenarios where they appear to be working well, as circumstances can change quickly. It also notes the value in working with industry regulators or monitors to ensure compliance. Additionally, the French study also discusses the importance of effective monitoring, highlighting the number of resources required to ensure their effectiveness.

6 Conclusion

Merger remedies are an important aspect of merger control, which is itself at the forefront of preserving effective competition across the world's economies. At the same time, merger remedies can be complex, taking place in an environment where authorities do not have perfect information and must rely on those who may not have an incentive for things to work well. Getting merger remedies right is therefore no easy task.

Ex-post assessment of merger remedies provides a tool to assist authorities in obtaining best practices for their merger remedies, tailored to their specific local conditions. By taking the time to consider how an authority's own merger remedies have evolved over time, it provides a unique opportunity to consider if things have worked well, or if there is room for improvement.

While many of these lessons will relate to the specific circumstances of the jurisdiction and their cases, it may be that common best practices can also emerge from the experience of others. As such, while there will be value in each jurisdiction undertaking an assessment of their own specific practices after the fact to review their effectiveness, this does not preclude the value in considering the outcomes of the ex-post assessments of others.

Ex-post assessments of merger remedies are not without challenges and need to be realistic in their aims. They involve costs and effort on behalf of the authority conducting the review, as well as on stakeholders that assist it. In some circumstances, such reviews can also open authorities up to reputational risks, if it shines a light on having designed or implemented ineffective remedies.

However, striving for best practice and being open to learning lessons is likely to enhance, rather than malign, an authority's reputation overall. Further, there are increasing numbers of examples of ex-post assessments of merger remedies, and these experiences demonstrate the value of the knowledge they can deliver. This practice also highlights that many different types of ex-post assessment are possible, ranging from large-scale studies covering many cases, studies that focus on individual cases, and even studies that focus on some types of remedies, such as divestments or behavioural remedies. Many of the challenges identified can be mitigated, for example by having clear communication with relevant stakeholders and robust processes for dealing with confidential information.

It is clear from this experience that complex quantitative methods, while useful, are not a prerequisite for a valuable ex-post assessment. This can substantially reduce the cost and complexity of such exercises. Authorities should identify the purpose of the review at an early stage and can narrow the scope of the project depending on the resources available. Further, a qualitative study based on interviews with key stakeholders, such as the relevant merging and remedy parties, ranging from between two to six per case, have been successful in delivering improvements to best practice. This provides hope that such exercises can be of value to a wide range of authorities, even those with few merger remedies to consider and few resources to spare.

Finally, to aid future ex-post assessment work, two issues are worth considering. First, as authorities need to know which remedy decisions they have made to conduct ex-post assessments, it is useful to create a database of past merger remedies as they go. Second, it may be worth considering how authorities can plan for ex-post assessments. For example, it may be feasible that compliance mechanisms within merger remedies could be designed with an ex-post assessment in mind, to ease the burden of such an exercise in the future.

References

ACCC (2022), *Ex post review of ACCC merger decisions*, https://www.accc.gov.au/system/files/Ex%20post%20review%20of%20merger%20decisions.pdf. [24]

Autorité de la Concurrence (2019), *Behavioural Remedies*, https://www.autoritedelaconcurrence.fr/sites/default/files/2020-01/eng_comportementaux_final_en.pdf. [30]

Carlton, D. (2009), “Why We Need To Measure The Effect Of Merger Policy And How To Do It”, No. 14719, National Bureau of Economic Research, https://www.nber.org/system/files/working_papers/w14719/w14719.pdf. [5]

CMA (2019), *Merger remedy evaluations - Report on case study research*, UK Competition and Markets Authority, https://www.gov.uk/government/publications/understanding-past-merger-remedies. [20]

CMA (2019), *Merger remedy evaluations - Report on case study research*, UK Competition & Markets Authority, https://www.gov.uk/government/publications/understanding-past-merger-remedies (accessed on 9 October 2023). [39]

Competition Bureau Canada (2011), *Competition Bureau Merger Remedies Study*, https://ised-isde.canada.ca/site/competition-bureau-canada/en/how-we-foster-competition/education-and-outreach/publications/competition-bureau-merger-remedies-study-summary. [21]

Competition, B. (ed.) (1999), *A Study Of The Commission’s Divestiture Process*, Staff of the Bureau of Competition of the Federal Trade Commission, https://www.ftc.gov/sites/default/files/attachments/merger-review/divestiture.pdf. [17]

Davies, S. and B. Lyons (2008), *Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition*, Edward Elgar Publishing. [32]

De Loecker, J., J. Eeckhout and G. Unger (2020), “The Rise of Market Power and the Macroeconomic Implications”, *Quarterly Journal of Economics*, Vol. 135/2, https://doi.org/10.1093/qje/qjz041. [3]

Deloitte (2009), *Review of merger decisions under the Enterprise Act 2002*, A report prepared for the Competition Commission, Office of Fair Trading and the Department for Business, Enterprise and Regulatory Reform, https://webarchive.nationalarchives.gov.uk/ukgwa/20140402142426/http:/www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/oft1073.pdf. [25]

Economics, B. (ed.) (2017), *The FTC’s Merger Remedies 2006-2012*, Federal Trade Commission, https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf. [18]

Elzinga, K. (1969), “The Antimerger Law: Pyrrhic Victories?”, *The Journal of Law & Economics*, Vol. 12/1, pp. 43-78, https://www.jstor.org/stable/724979. [14]

European Commission (2005), *Merger Remedies Study*, DG Competition, European Commission, https://ec.europa.eu/competition/mergers/legislation/remedies_study.pdf. [19]

Fletcher, A. (2016), *The Role of Demand-Side Remedies in Driving Effective Competition: A Review for Which?*, Centre for Competition Policy, https://www.regulation.org.uk/library/2016-CCP-Demand_Side_Remedies.pdf. [16]

Friberg, R. and A. Romahn (2015), "Divestiture requirements as a tool for competition policy: A case from the Swedish beer market", *International Journal of Industrial Organization*, Vol. 42, pp. 1-18, https://doi.org/10.1016/j.ijindorg.2015.06.005. [28]

Gowrisankaran, G., A. Nevo and R. Town (2015), "Mergers When Prices Are Negotiated: Evidence from the Hospital Industry", *American Economic Review*, Vol. 105/1, pp. 172-203, https://doi.org/10.1257/aer.20130223. [37]

ICN (2022), *Report on ex post merger evaluation*, International Competition Network, https://www.internationalcompetitionnetwork.org/wp-content/uploads/2023/02/MWG_Report-Ex-post-Merger-Evaluation-2022.pdf. [42]

ICN (2016), *Merger Remedies Guide*, International Competition Network, Merger Working Group, https://www.internationalcompetitionnetwork.org/wp-content/uploads/2018/05/MWG_RemediesGuide.pdf. [31]

Incentive (2018), *Ex post-analyse af tilsagn i fusionssager*, https://www.kfst.dk/media/ubkj0gjp/20200806-ex-post-analyse-af-tilsagn-i-fusionssager.pdf. [23]

Karikari, J. et al. (2007), "The impact of mergers in U.S. Petroleum Industry on wholesale gasoline prices", *Contemporary Economic Policy*, Vol. 25/1, pp. 46-56, https://doi.org/10.1111/j.1465-7287.2006.00027.x. [34]

Koltay, G., S. Lorincz and T. Valletti (2022), "Concentration and Competition: Evidence from Europe and Implications for Policy", *SSRN Electronic Journal*, https://doi.org/10.2139/SSRN.4069206. [43]

Koltay, G., S. Lorincz and T. Valletti (2022), "Concentration and Competition: Evidence from Europe and Implications for Policy", *SSRN Electronic Journal*, https://doi.org/10.2139/SSRN.4069206. [4]

KPMG (2017), *Entry and expansion in UK merger cases: An ex-post evaluation*, https://assets.publishing.service.gov.uk/media/5a82b3b440f0b6230269c40a/entry-and-expansion-in-uk-ex-post-evaluation-kpmg.pdf. [44]

Kwoka, J. (2015), *Mergers, Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*, MIT Press. [33]

Louis, F. and C. O'Daly (2023), *The Merger Control Review: International Merger Remedies*, https://thelawreviews.co.uk/title/the-merger-control-review/international-merger-remedies#footnote-101-backlink. [41]

Mandiriza, T., T. Sithebe and M. Viljoen (2016), "An Ex-post Review of the Wal-Mart / Massmart Merger", *WORKING PAPER CC2016/03*, Competition Commission South Africa, https://www.compcom.co.za/wp-content/uploads/2017/11/CC201603-Mandiriza-T-Sithebe-T-and-Viljoen-M-2016-An-expost-evaluation-of-the-Walmart-Massmart-merger.pdf (accessed on 6 October 2023). [27]

OECD (2023), "Assessing and Communicating the Benefits of Competition Interventions", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/competition/assessing-and-communicating-the-benefits-of-competition-interventions.htm. [38]

OECD (2022), "Disentangling Consummated Mergers: Experiences And Challenges", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/disentangling-consummated-mergers-experiences-and-challenges.htm. [45]

OECD (2022), *Disentangling Consummated Mergers: Experiences And Challenges*. [12]

OECD (2022), "Remedies And Commitments In Abuse Cases", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/competition/remedies-and-commitments-in-abuse-cases.htm. [13]

OECD (2019), *OECD Productivity Working Papers*, OECD Publishing, Paris, https://doi.org/10.1787/24139424. [2]

OECD (2018), "Market Concentration", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/market-concentration.htm (accessed on 5 October 2023). [1]

OECD (2016), "Reference guide on ex-post evaluation of competition agencies' enforcement decisions", https://www.oecd.org/daf/competition/Ref-guide-expost-evaluation-2016web.pdf. [8]

OECD (2013), "Remedies in Cross-Border Merger Cases", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/competition-remedies-in-cross-border-merger-cases.htm (accessed on 5 July 2023). [11]

OECD (2011), "Impact Evaluation of Merger Decisions", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/Impactevaluationofmergerdecisions2011.pdf (accessed on 5 July 2023). [6]

OECD (2011), "Remedies in Merger Cases", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/RemediesinMergerCases2011.pdf (accessed on 5 July 2023). [10]

OECD (2005), "Evaluation of the Actions and Resources of the Competition Authorities", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/prosecutionandlawenforcement/35910995.pdf (accessed on 5 July 2023). [7]

OECD (2003), "Merger Remedies", *Best Practice Roundtables on Competition Policy*, https://www.oecd.org/daf/competition/34305995.pdf (accessed on 5 July 2023). [9]

OECD (1994), *Merger cases in the real world - a study of merger control procedures*, https://www.oecd.org/daf/competition/31587583.pdf. [46]

Office of Fair Trading (2014), *Shell – Rontec: An evaluation of the OFT's conditional clearance of the merger*, https://webarchive.nationalarchives.gov.uk/ukgwa/20140402180350mp_/http://www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/OFT1525.pdf. [26]

Rogowsky, R. (1986), “The economic effectiveness of section 7 relief”, *The Antitrust Bulletin*, Vol. 31/1, pp. 187-233, https://doi.org/10.1177/0003603X8603100108. [15]

Sabbatini, P. (2008), “Assessing the Impact of Antitrust Intervention by the Italian Competition Authority”, *De Economist*, Vol. 156/4, pp. 491-505, https://doi.org/10.1007/s10645-008-9106-1. [22]

Severino, L., G. Resende and R. Lima (2021), *Ex post mergers evaluation: Evidence from the Brazilian airline industry*, Document from the Department of Economic Studies (DEE) of CADE, https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/documentos-de-trabalho/2021/Documento-de-Trabalho_Ex-post-mergers-evaluation-Evidence-from-the-Brazilian-airline-industry-versao-final.pdf. [40]

Silvia, L. and C. Taylor (2013), “Petroleum Mergers and Competition in the Northeast United States”, *International Journal of the Economics of Business*, Vol. 20/1, pp. 97-124, https://doi.org/10.1080/13571516.2012.715275. [35]

Tenn, S. and J. Yun (2011), “The success of divestitures in merger enforcement: Evidence from the J&J–Pfizer transaction”, *International Journal of Industrial Organization*, Vol. 29/2, pp. 273-282, https://doi.org/10.1016/j.ijindorg.2010.07.003. [29]

Various members of US Senate and Congree (2023), *Letter to FTC and DOJ re Merger Guidelines*, https://www.warren.senate.gov/imo/media/doc/2023.09.18%20Letter%20FTC%20and%20DOJ%20re%20Merger%20Guidelines.pdf (accessed on 18 September). [47]

Winston, C., V. Maheshri and S. Dennis (2011), “Long-Run Effects of Mergers: The Case of U.S. Western Railroads”, *The Journal of Law and Economics*, Vol. 54/2, pp. 275-304, https://doi.org/10.1086/655164. [36]

Endnotes

[1] For broader context, note that in some quarters there are calls to shift merger control towards increased use of prohibitions rather than remedies. See for example the letter to the FTC and DOJ from some members of the United States Senate and Congress in the context of their draft merger guidelines, which calls for abandoning the use of remedies all together, and instead to block illegal mergers (Various members of US Senate and Congree, 2023[47]). These issues are beyond the scope of this background note, which focuses on the ex-post assessment of merger remedies.

[2] There could be debate as to exactly what this means in practice, as most jurisdictions will consider whether a merger results in a substantial lessening of competition, so that the purpose of remedies could be considered as to restore competition such that it is not substantially lessened. For practical purposes, and for those of this paper, this could be taken to mean restoring competition to the level it would have been absent the merger.

[3] Data from OECD CompStats database between 2015-2020, based on 60 jurisdictions that provided comparable data over the period.

[4] It is worth noting that merger remedy decisions are generally resource intensive for authorities and could therefore account for a larger proportion of authority time than implied by these percentages.

[5] An ex-post assessment should be distinguished from the investigation or review that led to the adoption of the merger remedy in the first place, which will be generally referred to as the original decision in this note.

[6] This phrasing is for convenience and may not accurately describe all situations in which remedies come into place after a merger, for example if they follow undertakings from firms or a court order.

[7] In addition to lessons for their respective areas of focus, such studies can still be of value when considering how to improve merger remedy practice as they may contain general lessons that can be applied.

[8] This does not imply that these types of study are more valuable than others. Ex-post assessment of merger decisions more generally is covered in the OECD reference guide (OECD, 2016[8]).

[9] And its predecessor bodies, the Office of Fair Trading (OFT) and the Competition Commission (CC).

[10] See paragraph 35 of the Italian Contribution to OECD Working Party No. 2 on Competition Regulation, Roundtable on Assessing and Communicating the Benefits of Competition Interventions – Note by Italy, 12 June 2023, https://one.oecd.org/document/DAF/COMP/WP2/WD(2023)6/en/pdf

[11] See presentation by Antonio Buttà of the Autorità Garante Della Concorrenza E Del Mercato (AGCM) https://www.associazioneantitrustitaliana.it/wp-content/uploads/2020/09/slide-Butt%C3%A0.pdf (in Italian)

[12] There are many more examples of ex-post assessments of mergers that involved remedies, such as this example from Brazil in the airline industry (Severino, Resende and Lima, 2021[40]). A more general summary of more recent ex-post assessments can be found at (ICN, 2022[42]).

[13] There appear to be many examples of reviews that look retrospectively at past merger remedy practice but fall short of evaluating or assessing the effectiveness of individual studies.

[14] For example, (Louis and O'Daly, 2023[41]) review several international merger cases which resulted in remedies. This practice is not new, in (OECD, 1994[46]) the authors consider nine previous international mergers, some which resulted in remedies, to understand potential room for improvement in international merger review.

[15] In particular, the study suggests that alternative remedies, such as those used in other hospital mergers in the United States such as fire-walling negotiation teams, would have been unlikely to work as effectively as the outright prohibition. The merger in question was abandoned after objections from the FTC.

[16] Recommendation of the OECD Council on Merger Review, OECD Legal Instruments, Adopted 23/03/2005, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0333

[17] Further details of these estimates can be found in the FTC's entry in the Federal Registry, which is available here: https://www.ftc.gov/system/files/documents/federal_register_notices/2015/06/150616agencyinfofrn.pdf

[18] In general, it may also be worth authorities considering how they can encourage, and support, academic work that conduct ex-post assessments of merger remedies. While academic research is unlikely to have access to the same level of detailed information from the time of the study as the authority, much of the relevant information will be public, and the authority may be able to benefit from informative studies or research without having to devote its own resources.

[19] Pg 37, (CMA, 2019[20])

[20] This was the case, for example, with the second FTC study described in the previous section, where all cases between 2006 and 2012 were considered.

[21] A mixture of practice can be seen across the different examples described in section 2.

[22] In many jurisdictions and circumstances, remedies may be put forward by the merging parties themselves to avoid the prohibition of the merger. In those cases, it appears less likely that the remedy itself will be subject to an appeal process.

[23] The use of such a database would not be limited to ex-post assessments of merger remedies but could potentially be useful for other ex-post assessments, as well as for other functions, such as meeting reporting requirements or assisting with current cases.

[24] Several such reviews have been undertaken by economics consultancies on behalf of authorities, including (KPMG, 2017[44]), (Deloitte, 2009[25]) or (Incentive, 2018[23]).

[25] If alternative approaches have been taken to similar situations, perhaps in different jurisdictions, then this could provide useful insights into the value of different remedy choices.

[26] If not already included, the study should also discuss with the original case teams if possible.

[27] This analysis is based on the published reports from the European Commission, Canadian Competition Bureau and the FTC, using the stated number of stakeholder interviews conducted divided by stated number of cases or orders considered. In many instances, the number of remedies is greater than the number of cases – i.e., there are several remedies within the one case – and not all remedies were considered in every case.

[28] The robustness of the findings will need to be considered carefully. The more ambitious the purpose of the ex-post assessment, in particular the more it seeks to understand the overall effectiveness of remedies on restoring competition compared to the workings of the remedy itself, the larger the required number of interviews to arrive at robust conclusions.

[29] See, for example, discussion in (OECD, 2016[8]), as well as from a specific example in (Tenn and Yun, 2011[29]). Of course, qualitative analysis also requires a consideration of what would have happened absent the merger remedy, but generally requires this to be defined less formally.

[30] See presentation by Antonio Buttà of the Autorità Garante Della Concorrenza E Del Mercato (AGCM) https://www.associazioneantitrustitaliana.it/wp-content/uploads/2020/09/slide-Butt%C3%A0.pdf (in Italian)

[31] Requests of these nature, if for the purpose of ex-post assessment, should be limited to only the time periods necessary for that assessment.

[32] As an example, the CMA recently reviewed undertakings that British Sky Broadcasting Group plc entered into in 2001 following a transaction, to understand if they are appropriate or if they need to be varied, superseded or released. See: CMA, Review of British Sky Broadcasting Group Merger Remedy, March 2023, https://www.gov.uk/government/consultations/review-of-british-sky-broadcasting-group-merger-remedy#full-publication-update-history

[33] The affected party is likely to have a clear incentive to request such a review, as the obligations from any outdated remedy could be imposing costs upon them.

[34] Sunset clauses specify the situation in which the remedy will end, as opposed to continuing indefinitely independently of the circumstances.

[35] Paragraph 1.8 of (CMA, 2019[39]).

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