

Agenda

Advancing economics in business

Damages actions: the European Commission White Paper

The European Commission seeks to promote private actions where the victims of competition law infringements—such as price fixing and abuse of dominance—claim damages from the perpetrators. Its White Paper, published in April and consulted upon until this month, sets out the basic principles behind this policy, as well as suggestions for concrete actions to facilitate such private actions across courts in Europe. An important economic and financial aspect of damages claims is how to quantify the harm to victims of anti-competitive practices

In considering the quantification of damages, the European Commission states in its recent White Paper that the precise calculation can be excessively difficult, and therefore that the calculation requirements can be disproportionate to the amount of damages suffered.¹ As a result, for the next stage in the policy debate, the Commission proposes to:

draw up a framework with pragmatic, non-binding guidance for quantification of damages in antitrust cases, e.g. by means of approximate methods of calculation or simplified rules on estimating the loss. (White Paper, p. 7)

This article first looks at ways in which damages can be quantified using various modelling techniques, and then comments on certain economic aspects of some of the other issues raised in the White Paper.

Damages calculations

The guiding principle behind the Commission's approach in the White Paper—in line with EC case law—is that victims of antitrust infringements are entitled to receive full compensation for the actual losses suffered, the lost profit due to the infringement, and the right to interest.²

This entitlement to full compensation for the real value of the harm suffered inevitably means that a reasonable degree of detail is required in damages calculations; without this detail it is difficult to overcome the inherent uncertainty that exists about what the true value of compensation should be. However, this does not automatically mean that all cases require the same level of detail. The appropriate level of complexity and detail will vary from case to case, depending on the size of the harm suffered, the nature and complexity (or simplicity)

of that harm, and the quality and extent of the data available.

Dimensions of simplicity and complexity

The concept of complexity of a damages calculation as used by the European Commission in the White Paper's accompanying Staff Working Paper appears to refer principally to the complexity of the required input.³ The following reference to the calculation methods provides an example:

The methods are indeed characterised by the fact that the resulting approximation of the actual loss suffered seems to be proportional to the complexity of the required input. (Staff Working Paper, para 198)

However, there are several other criteria in addition to input requirements on the basis of which a quantitative model's complexity or simplicity can be assessed.

1. **Conceptual complexity**—the ease with which each model, and its underlying assumptions, can be described and understood. Is the model intuitive, or does it require detailed explanation?
2. **Technical complexity**—the complexity of the calculations and execution of the models. How easy is it to obtain the output once all inputs are available, and is knowledge of econometrics required?
3. **Input requirements**—the ease with which the required inputs can be obtained. Is the information in the public domain (eg, data in statutory accounts, or from national statistical bodies)? Is it already produced by companies (eg, data in management or statutory accounts)? Or is considerable work required

This article is based on Oxera's submission to the European Commission, Oxera (2008), 'Comments on the White Paper on Damages Actions for Breach of the EC Antitrust Rules', July.

to produce the information (eg, estimating demand elasticities from price and sales data series)?

4. **Underlying assumptions**—the number and strength of assumptions. Does the modelling technique require a large number of assumptions—eg, about the market structure and the economic conditions? Are these assumptions realistic?

A calculation method can be deemed complex under one criterion but simple under another. Table 1 uses the ARIMA (auto-regressive integrated moving average) model as an example; this model is chosen because it has been used in damages cases to estimate the counterfactual, and is also often used by businesses as a forecasting tool. The ARIMA model is an econometric model that assumes that past values are a good predictor of the future. It attempts to let the data ‘speak for itself’ by identifying appropriate patterns within the series and using these to predict future growth patterns. Table 1 demonstrates that, although the model requires little input (ie, low input complexity), it is technically challenging, involving a number of stages that need to be completed before the output is obtained.

The appropriate level of simplicity/complexity will vary on a case-by-case basis. A very simple approach may not take into account all the relevant factors (eg, external shocks, such as oil price rises). More complex approaches, while often addressing many of the limitations of simpler approaches, and therefore potentially providing more accurate results, may be time-consuming and may not always add significant value. Thus, the extent to which simple or complex methodologies are adopted should be determined by the nature of the case (eg, in terms of the amount of money at stake), the information available, and the value added in terms of accuracy of the estimate by moving from a simpler to a more complex model.

Methodologies for damages calculation

Within any damages case—whether motivated by competition law, or other factors, such as infringement of intellectual property or breach of contract—there are three important questions that must be answered:

- who is damaged?
- how are they damaged?
- by how much?

The focus here is on the third question, and specifically on the techniques that can be used to quantify the losses suffered by the claimant as a result of the infringement.

The underlying objective of damages estimation is to return the plaintiff to the position that they would have been in had it not been for the competition law infringement (the ‘but for’ position). Returning the plaintiff to the ‘but for’ position effectively requires a payment to be made that represents the difference between the ‘factual’ situation (what actually happened) and the ‘counterfactual’ situation (what would have happened in the absence of the infringement). As the counterfactual is, by necessity, an estimate of what the world would have looked like, there is an inherent degree of uncertainty when assessing damages claims. This uncertainty can be reduced by introducing cross-checks in the analysis; these can range from checking that the models concur with business and commercial reality (eg, comparing forecast production results against actual capacity constraints in the industry), and using multiple models alongside each other (eg, using forecast pooling, discussed below).

Table 2 shows a number of methods—largely based on those presented in the Commission’s earlier Green Paper—which can be used to estimate the counterfactual.⁴ (The next step in the ‘by how much’ calculation, which uses the counterfactual estimate to value the harm or lost profit to victims, can also involve a number of valuation methods, for which a ranking by complexity can also be undertaken.) Table 3 ranks the methods in terms of their complexity.

As can be seen from the discussion above, each method has some advantages and disadvantages. If one method is clearly superior (eg, uses the most high-quality data, or is most clearly related to the facts of the case), and therefore has the lowest available level of uncertainty associated with it, then that method should arguably be

Table 1 The ‘complexity’ of the ARIMA model

Dimensions of complexity	ARIMA model complexity
Conceptual complexity	Reasonably simple—identifies patterns in historical data, and uses these to derive forecasts
Technical complexity	Reasonably complex—for example, estimating an ARIMA model generally involves the following: estimating the auto-regressive term, the order of integration, the moving average component, and the lag structure; testing the level of significance of each of these components; and finally testing to check whether all patterns in the data have been identified and removed
Input complexity	Very simple—requires only a single variable—ie, the variable for which the forecast is required
Assumption complexity	Reasonably simple—there are two main assumptions: i) that the structure of the model allows it to correctly identify and reflect the patterns in the data; and ii) that historical patterns and trends in the data are a good guide to future patterns

Source: Oxera.

Table 2 Methods of estimating the counterfactual/‘but for’ scenario

Model	Description
Before and after	The counterfactual is approximated by the situation before and/or after the infringement
Yardstick	The counterfactual is approximated by the performance of a similar but unaffected group (a control group)—eg, a parallel but non-cartelised market
Difference-in-differences	A combination of the two methods above. The performance of the control group before and during infringement is compared with the performance of the affected group before and during the infringement. This ensures that factors specific to the control group do not affect the damages estimate for the affected group
Cost-based approach	The counterfactual price is calculated by using the data on the defendant’s production cost and adding a margin to obtain a price which can be considered reasonable under competitive conditions. Unlike other methods, this model can usually provide information only on prices, not counterfactual volumes
Time series techniques such as ARIMA	The counterfactual is estimated using the variable’s past performance. This is a more sophisticated ‘before-and-after’ technique than a simple average or trend estimation as it takes into account patterns in the data
Deterministic econometric model	This explains market outcomes using the drivers hypothesised by economic theory, such as GDP, inflation, and changes in input costs
Oligopoly modelling	Such a model uses data on the structure of the market (eg, number of firms, market shares), combined with an assumption of how the market operates (eg, Cournot oligopoly) and the structure of firms’ costs and market demand to estimate the counterfactual

Source: Green Paper and Oxera analysis.

used to estimate the damages counterfactual. However, it is often difficult to choose one particular method over another—therefore, several methods of estimation producing a range of results can be adopted, and the results cross-checked.

One option would be to present a range of results before the court, including explicit commentary about the degree of certainty associated with each, allowing a decision to be reached by the judge about what the final value should be. Alternatively, where the legal requirement is for the economic expert to produce a specific damages figure, the results of several models can be combined into a single estimate (forecast pooling). This approach can actually increase the accuracy of the estimate, without increasing the complexity, by relying on a wider set of models and the information that underlies them. A number of methods can be used for this, although simply taking the mean

average of the available forecasts may be both straightforward and robust.

Other economic aspects of issues raised in the White Paper

The principle of compensation

The principle behind the White Paper that “any individual” who has suffered harm caused by an antitrust infringement must be allowed to claim damages’ (p. 4) applies to all categories of victim, all types of breach of Articles 81 and 82, and all sectors of the economy.

In the discussion in the White Paper on ‘Standing’ (Section 2.1), the Commission places much emphasis on victims who are indirect purchasers—ie, purchasers who did not buy from the infringer directly but who suffered considerable harm because an illegal overcharge was passed on to them along the distribution chain. However,

Table 3 Classification of damages calculation methods by complexity

Estimation method	Conceptual complexity	Technical complexity	Input complexity	Assumption complexity
Before and after	Low	Low	Low	Low
Yardstick	Low	Low	Low to medium	Medium
Difference-in-differences	Medium	Medium	Low to medium	Low to medium
Cost-based approach	Low to medium	Medium	Low to medium	Medium
Time series techniques such as ARIMA	Low	High	Low	Medium
Deterministic econometric modelling	Medium	High	High	High
Oligopoly modelling	Medium to high	Medium	Medium to high	High

Note: The classification of models by complexity is inherently subjective. The degree of complexity will vary depending on the precise way in which the model is operationalised and the specifics of the case at hand.

Source: Oxera.

there are other types of victim who receive less attention in the White Paper or the Staff Working Paper, and for whom the practical problems of claiming damages may be even greater than for direct and indirect purchasers. By ascending order of practical difficulty in making claims, three of those types are as follows.

- **Competitors to the infringers**—these are more likely to be entitled to damages in cases of exclusionary anti-competitive practices (as they are likely to have been harmed) than in cartel cases (where competitors often benefit, even if not part of the cartel). The conceptual analysis of the damages suffered as a result of exclusionary practices can be more complicated than assessing the overcharge, even if the methodologies employed for estimating damages (as discussed above) are the same.
- **Suppliers to cartelists**—suppliers to the infringing parties could also suffer damages. For example, cartels usually result in lower levels of output due to the higher prices they cause. Lower levels of output mean that less input is required, thus potentially harming suppliers. While, conceptually, such supplier claims would seem equally as valid as claims by customers of the cartel, the White Paper does not provide a great deal of detail on how gaining legal standing for these victims could be made easier.
- **Consumers who cease to buy the product**—in addition to the direct and indirect customers who actually still purchase goods from the cartelists, there is another group of customers who stop buying, or buy less of, the product as a result of the overcharge (these are known as ‘deadweight loss’ sales). While this is widely considered a welfare harm in economic theory, it is not clear from the White Paper whether parties suffering these deadweight losses can be given legal standing in practice. The obvious practical difficulty is how to identify these potential customers after the event, although they are as much (or even more) victims of the cartel as those who continue buying at the higher cartel price.

Passing on overcharges to indirect purchasers

The White Paper proposes allowing the passing-on defence to be used by the defendant against a claim for compensation of the overcharge. The passing-on defence can also be invoked by indirect purchasers and end-consumers to demonstrate that they suffered harm. Because it can be difficult for the indirect purchaser to prove the existence and the extent of the passing-on due to the distance from the infringer, the White Paper suggests that indirect purchasers should be able to rely on the rebuttable presumption that the illegal overcharge was passed on to them in its entirety. This is intended to

make it easier for them to bring claims (White Paper, p. 8).

However, if the purpose of a rebuttable presumption is to act as a reasonable proxy for what is most likely to happen in reality in a good proportion of cases, assuming 100% pass-through is unlikely to be a reliable starting point. This is because economic theory demonstrates that 100% pass-through is typically achieved only when markets are perfectly competitive. In reality, most markets are more accurately characterised by various forms of oligopoly, which would be expected to have lower levels of pass-through.⁵ Furthermore, in industries with long supply chains, the effect will be compounded: if there are four stages in a supply chain, each with 75% pass-through, end-consumers will face only 42% of the original overcharge.⁶

Thus there is a risk that because the rebuttable presumption is unlikely to reflect reality in a significant proportion of cases, it will become routinely rebutted by defendants. In turn, this may force claimants to engage in arguments about the degree of passing on—the very difficulty which the presumption was aiming to reduce.

Access to evidence: disclosure inter partes

An important area of focus in the White Paper is the disclosure of information—much of the key data required to substantiate a damages claim will often be in the possession of the defendant. In this regard, for any economic and financial analysis of the quantum of damages there are certain sources of information that will almost always be of relevance to the estimation methodology applied, and that could therefore be included in some form of ‘standard list’ of information to be disclosed by the defendant. These sources include the following.

- Data on sales, volumes and prices of the product(s) in question, for as long a period as possible. This would ideally cover the periods before, during and (where relevant) after the infringement, and regular intervals (daily, weekly, monthly, quarterly or annually, depending on the product and the infringement concerned).
- Management accounts of the defendant, covering the product(s) in question. These accounts will often contain vital financial information for the damages claim that is often not available from published accounts. Again, this would ideally cover the periods before, during and (where relevant) after the infringement.
- Business plans of the defendant, covering the product(s) in question, both for past periods (as these plans may provide valuable insight into the ‘but for’ situation) and for future periods.

- Any market studies or consumer surveys that the defendant has undertaken in relation to the product(s) concerned over the relevant period of analysis. This can provide useful insight into consumer and/or competitor behaviour, and hence may be informative for the counterfactual analysis.
- Any board minutes or other internal notes from the defendant in which commercial strategies or actions with regard to the product(s) concerned are discussed. Again, this can provide vital information for the counterfactual analysis.

reduction could be granted solely on the basis of objective evidence that imposition of the fine as provided for in these Guidelines would irretrievably jeopardise the economic viability of the undertaking concerned and cause its assets to lose all their value.⁷

One of the motivations for this policy seems to be to ensure that, by fining firms for breaches of the competition rules, the Commission does not irrevocably harm the competitive landscape, thereby harming consumers further.

Interaction between the fining guidelines and damages claims

Under the European Commission's 2006 guidelines on setting antitrust fines, the fines imposed on the infringer may be adjusted downwards, taking into account the infringer's ability to pay:

In exceptional cases, the Commission may, upon request, take account of the undertaking's inability to pay in a specific social and economic context. It will not base any reduction granted for this reason in the fine on the mere finding of an adverse or loss-making financial situation. A

Conceptually, the same logic would apply to the amount of damages payable after a successful damages action, which may be expected to follow a Commission fine: either or both of these could cause such irrevocable harm. Yet the White Paper does not appear to provide for a mechanism to reduce the damages payable in the event of such an effect on the viability of the infringer arising. There is therefore an inconsistency between the approach to fines and the approach to damages claims. However, allowing for a possible reduction in damages could be considered inconsistent with the principle of full compensation to the victims of the infringement.

¹ European Commission (2008), White Paper on Damages Actions for Breach of the EC Antitrust Rules, COM(2008) 165, 2.4.2008.

² Section 2.5 of the White Paper. Oxera has explored some of the issues surrounding the appropriate interest rate applicable to damages calculation in *Agenda* (2006), 'Damaged Interest: The Choice of Discount Rate in Claims for Damages', September. Available at www.oxera.com.

³ European Commission (2008), Commission Staff Working Paper Accompanying the White Paper on Damages Actions for Breach of the EC Antitrust Rules, SEC(2008) 404, 2.4.2008.

⁴ European Commission (2005), Green Paper Damages Action for Breach of the EC antitrust rules, COM(2005) 672 final, 19.12.2005; and European Commission (2005), Commission Staff Working Paper Annex to the Green Paper Damages Actions for Breach of the EC Antitrust Rules, SEC(2005) 1732, 19.12.2005, paras 133–34.

⁵ Assuming linear demand and constant marginal costs with respect to volumes, firms in a Cournot oligopoly will pass through $N/(N+1)$ of the overcharge, where N is the number of firms in the market. A monopolist would pass on 50% of the overcharge, while Cournot duopolists would pass on two-thirds of the overcharge. See Ten Kate, A. and Niels, G. (2005), 'To What Extent are Cost Savings Passed on to Consumers? An Oligopoly Approach', *European Journal of Law and Economics*, **20**, pp. 323–37.

⁶ This stylised example is calculated as 0.75^3 . The power 3 is used, rather than power 4, as the first stage in the supply chain is assumed to be the cartellists, which 'pass on' 100% of the overcharge to their purchasers. A 75% pass-through is achieved when there are three firms in each intermediate market, using the formula in the previous footnote.

⁷ Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003 (2006/C 210/02), para 35.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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