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A Practical Guide to Estimating Cartel Damages: Recipe Books v Menus

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In our experience, a fairly standard issue in cartel damages cases is that the defendants and claimants commission reports which derive wholly different estimates of the damages. Moreover, this issue is often compounded by a lack of clarity on why these differences arise, such as the extent to which they are a result of differences in the assumptions, data and estimation techniques used.

The position becomes even more complex if direct and indirect purchasers seek damages as this can create further disputes. Direct purchasers may wish to increase their share of the damages by arguing that they absorbed most or all of the higher prices without increasing their own selling prices to customers (ie, the overcharge was not 'passed on' to indirect purchasers). Indirect purchasers, on the other hand, may wish to argue that they suffered higher prices from the direct purchasers, but in turn did not increase their own selling prices appreciably to their customers.¹ The extent of pass-on may also affect the total quantum of any damages claim, particularly if fewer indirect purchasers bring damages claims.

Given the scope for disagreements, the obvious question is which set of estimates is more robust. Unfortunately, this question cannot be addressed simply by reviewing the European Commission's guide to damages estimation.² This is because the Commission's Guide primarily sets out a 'menu' of various techniques that may be applied to quantify damages, rather than a practical guide or 'recipe book' for deriving robust estimates for the court.

The focus of this article is to outline a more practical damages 'recipe book'. It does not consider the legal issues associated with bringing damages actions (eg, the scope and nature of any class actions), but there are a number of good articles on this subject.³

What is the role of experts?

A natural starting place is to outline the appropriate role of experts in a cartel damages case. A range may well be required, including: data or IT experts; forensic accountants (who appraise financial and pricing data); market experts (who can opine on market conditions in both the cartelised and downstream markets); and economists who use the various data to derive damages estimates.

In our view, the fundamental purpose of any expert is to 'shine a bright light in dark places' and inform the damages assessment by establishing or analysing the facts for robust analysis and indicating what will influence the quantum of any claim. It is important to consider carefully the scope of any instructions to experts where any such letter of instruction may be ultimately disclosed to the court. Experts should also make clear the source of any facts, opinions or assumptions on which they rely, and be careful to distinguish between their expert opinions and any evidence or opinion as to the underlying facts.

Courts will expect all expert witnesses to be independent of the parties instructing them and thus to express their own objective, expert opinions. This is reflected in the standards required of an independent expert witness under part 35 of the UK Civil Procedure Rules (Rule 35.3). In the course of settlement discussions, experts

may produce reports that do not meet these standards, but we would query their value.

The counterfactual: core principles for establishing an alternative universe

The 'but for' world

Quantifying cartel damages essentially requires comparing what has actually happened in an affected market with what would have happened but for the infringement taking place in an alternative world (known as the 'counterfactual').⁴

Actual conditions in the affected market raise various factual questions that may pose some data challenges, particularly if the cartel operated many years ago. However, establishing the counterfactual usually poses greater challenges.

In particular, establishing the counterfactual requires an estimation of relevant competitive parameters, such as sales volumes, prices, profits, trends in costs and demand, capacity utilisation, market structure and so on, in both the defendants' and claimants' markets based on the hypothetical world that the infringement did not take place.

For a direct purchaser, there are two key components of damages in a price overcharge case that need to be quantified:

- the actual overcharge on each unit of input purchased, which involves comparing the actual price of each unit with the but-for price in the counterfactual; and
- lost profit (or utility) due to a volume effect – fewer units of the customer's product are purchased because it is more expensive.

For an indirect purchaser, the damages from a price overcharge case could be determined by estimating the direct overcharge and then the extent to which this was passed on, or trying to establish the but-for prices for the products or services incorporating the cartelised input, which the indirect purchaser would otherwise have faced.

Starting point: tell me about the cartel

The starting point for any counterfactual assessment is to consider all of the available information on the scope, nature, duration and efficacy of the cartel. This may provide direct information on the cartel's effects and highlight material economic issues that are likely to determine the quantum of any damages claim. Accordingly, claimants often wish to see:

- the cartel decisions of competition authorities, and claimants may therefore complain about delays in these decisions being published. Claimants may also wish to see leniency and settlement materials submitted by the defendants. However, under the Commission's latest proposed directive on antitrust damages,⁵ leniency and settlement submissions would never be disclosed so as to maintain incentives for defendants to confess anti-competitive behaviour to competition authorities to secure part or complete immunity from fines;

- any information otherwise in the defendants' possession as to how the cartel operated through disclosure. However, such disclosure exercises may be very costly if this requires extensive document reviews;⁶ and
- any other direct documentary evidence as to the effects of the cartel. For example, there may have been a meeting at which it was agreed by the cartelists that their prices should be increased by a certain amount, and it could then be assessed whether prices actually did increase as envisaged.

However, even if the competition authority's decision is available, there may be issues which need to be explored further. For example, if the defendants charged higher prices as a result of the cartel, then the claimants may wish to explore whether this increased the prices charged by non-cartelist competitors (commonly referred to as 'umbrella effects'). This is a factual question, which would depend on a number of factors, including how close a substitute these competitors are, the proportion of the market covered by the cartel and the nature of competition in the market.⁷ Similarly, the duration of any overcharge may not be fully established by the cartel decision.

Qualitative evidence as to the operation of the cartel should also inform the analysis of cartel effects. For example, if the documentary record suggests that the cartel did not have constant effects over time (due to, for example, periodic price wars, or a firm ceasing to participate in the cartel), then this should be reflected in any modelling of cartel effects. Similarly, if the documentary record indicates that the cartel had different effects on certain customers or products, then any modelling should not assume constant average effects across customers or products. In particular, inappropriate averaging of prices across customers or products in such circumstances may mask the actual effects of the cartel.

Keep it simple

Given that, by definition, a counterfactual involves establishing an alternative version of facts to the actual market outcomes observed, there are inherent uncertainties and assumptions involved in establishing one, and there is often more than one possible but-for scenario.

In this regard, the best approach typically involves the fewest assumptions, which should ideally be provable by reference to the data and which is also likely to be the easiest to explain and justify in court.

While real world competitive effects may be complex, complexity should only be added to the assessment of the counterfactual if this adds value and robustness.

Data issues: 'garbage in, garbage out'

A key starting point of any damages estimate is ascertaining the availability and accuracy of data, particularly data on contractual arrangements, purchase volumes, input costs and pricing.

Both defendants and claimants are subject to information asymmetries. Defendants will generally have superior information on the cartel and the cartelised market, and therefore the actual overcharge. Claimants will generally have superior information on their own downstream markets, which is relevant to any assessment of pass on. Both may seek to address these information asymmetries through disclosure requests (either as part of settlement discussions or in the context of court procedures), as well as by using market or economic experts. Claimants may be able to mitigate further information asymmetries by cooperating and sharing

information about the prices they were charged by the cartelists and any other suppliers outside of the cartel.

Moreover, as a significant amount of time may have elapsed since the cartel operated, there may be difficulties in accessing such data. However, where a record was created, there is usually some retention of the data. For example:

- paper records (typically for transactions dating before the 1980s) can be scanned in and searched electronically;
- records that were once on mainframe databases on the corporate network, or even more bespoke and antiquated systems (typically from the 1980s and 1990s), may be retrieved from archival and on- and off-site backup systems; and
- mainstream databases (from 2000 onwards) are likely to be retrievable from backup sources, including cloud storage. External market research data may also be available.

Having obtained some data, it is essential to understand its nature and limitations. Regardless of how robust and elegant the quantification methodology selected is, if the data inputs are inaccurate or unreliable, the analysis will also be unreliable ('garbage in, garbage out'). A basic list of data checking before any quantification begins should involve:

- Understanding what the data is used for internally and by whom, and who collated it. It is also important to assess what (if any) quality control procedures were implemented to confirm its accuracy, either at the time the data was produced or after. Ideally, this would be clarified with the company's management, accountants and IT staff. For example, it would be necessary to check whether separate discounts and offers were provided on any list prices provided, and to distinguish between any estimates (eg, for forecasting or budgeting purposes) from actual facts.
- Establishing precisely what the data covers – for example, what product or services are covered, the frequency of the data (eg, weekly, monthly or annual) and relevant units of measurement (eg, dollars/euros per pound/tonne, and whether budget/forecast rather than actual exchange rates are applied).
- Understanding why there are any gaps in the data (over and above legacy data issues). Any interpolation or extrapolation from known data points to fill in missing observations would need to be defensible. For example, does this approach to missing data match observable business trends, would the results be materially affected if other plausible estimations were adopted, and does the undertaking adopt the same approach to missing data for internal business or operational purposes?
- Verifying that any purchase or selling prices, costs and other financial data can be tied back to sales or purchasing ledgers and management accounts (preferably by a forensic accountant).

As a rule, any robust expert report would be expected to contain a detailed section addressing all of the data issues raised above, and what data adjustments (if any) the expert has made.

Estimating the overcharge

As noted above, estimating the overcharge essentially involves comparing the actual price with the but-for price, having regard to how the quantity of units purchased was affected by the overcharge. Most of the effort involved in estimating the overcharge consists of estimating the but-for price. A number of techniques of varying degrees of complexity may be considered for these purposes.

Can any presumption be advanced as to the likely quantum of any damages claim?

There are some European national court precedents which presume that a cartel is likely to increase prices.⁸

Academic research suggests that most cartel conduct – whether this took the form of price fixing, market sharing or production restrictions – has resulted in price overcharges. For example, Connor (2014) reviewed economic studies and judicial decisions covering 2,041 quantitative estimates of cartel overcharges (as a percentage of price). Results for all observations from pre-1900 to 2013, based on where the cartel took place, are summarised below.

Cartel overcharge based on where collusion took place, pre-1900 to 2013

	Number of estimates	Median overcharge (%)	Mean overcharge (%)
USA and Canada	512	22.0	38.3
Multiple nations in Western Europe	141	25.0	38.1
Single nations in western Europe	292	16.1	60.5
Asia and Oceania	146	20.4	37.9
Africa, Southern America & Eastern Europe	61	20.0	23.4
Global (two or more continents)	383	30.4	65.6
Total	1535	23.0	48.7

Source: Connor (2014), Table 9.

The table shows that across all geographies and cartels, the median overcharge is 23 per cent (ie, half of cartels had a lower overcharge than 23 per cent and half had a higher overcharge), with a mean cartel overcharge of 49 per cent. For non-global, multinational cartels in Western Europe, the median overcharge is 25 per cent compared with a mean of 38 per cent. This indicates that some multinational cartels in western Europe were estimated as having a considerably greater effect on prices, with this increasing the mean average overcharge. Global cartels appear to result in higher overcharges.

This is a richer data set than that considered by Oxera (2008).⁹ Oxera examined 114 cartel observations from 1960 onwards across different geographies and found a median overcharge of 18 per cent. This is similar to Connor's results, but Connor's results also suggest that the geographical coverage of the cartel matters.¹⁰

On the other hand, Connor (2014) shows that across the period as a whole 6 per cent of cartels were found to have led to zero overcharge or even undercharge, and Oxera (2008) similarly found this was the case as regards 7 per cent of its cartel data set. However, it should be noted that a failure to find any overcharge is not the same as these cartels having no effect. This is because in some cases it may have been difficult to disentangle the effects of the cartel from other market factors also affecting prices.

Given the diversity of outcomes, there is no basis for presuming any particular level of overcharge, although the Commission's proposed damages directive would establish a 'rebuttable' presumption that cartels cause harm. Moreover, the quantum of damages would be affected by the degree of pass on, with the Commission's proposed damages directive also allowing the pass-on defence.¹¹

The ability of a cartel to raise prices will depend on a range of factors, including:¹²

- the ability to monitor whether other cartelists are keeping to the agreement and to punish any 'cheating';
- the scale of barriers to entry or competition from suppliers outside the cartel;
- the price elasticity of customers (and their ability to switch away or develop alternative sources of supply); and
- the cartel's ability to adjust the agreement in response to changing market conditions.

Prices before, during and after: the Goldilocks problem

The simplest method to estimate the but-for price is to compare prices in the same market for time periods before, during and after the cartel period, based on the premise (which may be open to challenge) that the periods before and after the cartel are considered to be unaffected and reflective of the competitive price.¹³

This method could be applied directly to estimate counterfactual prices. This can be done in a simple 'join the dots' fashion (eg, by assuming that during the cartel period prices would have varied in a straight line fashion between pre and post-cartel prices), or in a more complex manner based on some econometric extrapolation of pre or post-cartel price trends into the cartel period.

The chief difficulty with this technique is that there may be other factors that also influence prices between periods, such as input costs or demand shocks. Consequently, it may be useful to conduct econometric analysis to try to isolate the impact of the cartel from these other factors. Whether this is a material issue depends on the extent to which such market shocks have occurred. For a short-lived cartel, such shocks may be less of an issue.

Where pre and post-cartel data is available, there is often a question of whether the 'before' prices or 'after' prices are a superior basis for estimating the but-for price. However, unlike Goldilocks (who knew whether something was just right), there is no straightforward answer. Which prices should be used as a benchmark depends on factors such as:

- the precise quality and availability of price data before or after the cartel. A long-lasting cartel from many years ago may not, due to data limitations, provide enough periods of 'before' price data. On the other hand, a cartel that has recently ended may not provide sufficient amounts of 'after' price data;
- the exact duration of the overcharge may not coincide with the official cartel period found by the competition authorities;¹⁴
- a delay in returning to non-cartelised prices after the supposed cartel period has ended. The Commission observes that such a delay could even be indefinite in oligopolistic markets, where tacit collusion is possible given the knowledge gained during the cartel.^{15 16} These possibilities should be backed up by supporting factual evidence (eg, the cartel might not have long-lasting effects if the competitive value of information exchanged 'depreciates' rapidly due to cost, demand or technology changes); and
- at the other extreme, there may be temporary price wars to gain market share after a cartel has been uncovered and dissolved. This could imply that the time period immediately after the cartel does not best reflect non-cartelised prices. For example, in response to a deviating cartel in 2001 and dawn raids in mid-2002, price wars erupted in the German cement market, spreading across all German regions due to cross-regional retaliation strategies.¹⁷ It is also possible that there were temporary price wars before the cartel began.

Such factors could differ by geographical and product markets (if more than one geography and type of product was cartelised). The analysis may also be affected by cartelist or claimant-specific issues. Any potential variations are worth investigating and incorporating into the analysis as appropriate.

The points made above about whether before or after prices are the best benchmark of counterfactual prices also apply to any econometric modelling of prices. This is because such modelling implicitly assumes that there is some period of time over which prices are somehow normal and not influenced by the cartel.

Econometrics: how useful?

Econometric analysis, mainly in the form of multivariate regression, could be used as a more advanced method of carrying out before, during and after analysis.¹⁸ It is mainly useful in trying to isolate the impact of the cartel on prices and profit margins by controlling for other supply and demand factors affecting prices and profit margins during the cartel period. Multivariate regression can involve one of two methods:

- forecasting prices for the infringement period based on the before and after data to infer counterfactual prices during the cartel. This has the advantage of not being ‘tainted’ by data from the cartelised period, and could also be used when actual pricing data during the cartel period is unavailable or unreliable; or
- using a separate explanatory ‘dummy’ variable to denote the cartel period, based on before, during and after data.¹⁹ (This dummy has a value of one during the cartel period, and is otherwise zero). This approach has the advantage of using all available data. (As noted earlier, where the cartel did not have reasonably constant effects across the cartel time period, customers or products, the modelling should not impose such an assumption by having one common dummy variable.)

In order to cater for outside factors that could explain why prices were higher during the cartel, the regression should also incorporate:

- relevant supply-side explanatory variables, such as input costs or technology changes; and
- relevant demand-side explanatory variables, such as a dummy variable catering for a demand shock at a particular point in time (eg, due to a sharp fall in demand observed in a number of markets following the advent of the financial crisis) or factors capturing the overall level of demand.

In assessing the use of any econometric analysis, there are a number of technical issues that should be considered, including:²⁰

- how the analysis should be interpreted – for example, an explanatory variable that is ‘statistically significant’ may nonetheless be economically unimportant if it only explains a very small part of why prices and profit margins vary in the way that they do;
- how well the regression fits the data – a regression that fits well should incorporate a number of relevant demand and supply side factors, plus a dummy variable for the cartel period (if this is the modelling approach adopted). These should be statistically significant and of the right sign (eg, higher costs would not be expected to depress prices), and ideally explain a high proportion of the price changes;²¹ and
- calculating and acting on robustness checks, then testing whether variables that appear to be statistically significant are in fact significant.²²

Returning to the recipe book analogy, any econometric analysis should explain carefully the sources of the data used, the alternative econometric models the expert considered and their rationale for choosing their preferred model. There are a number of econometrics articles with titles such as *Let’s Take the Con Out of Econometrics* (Leamer, 1983) with the central message that econometrics needs to be an objective science rather than the equivalent of ‘pulling a rabbit out of a hat’. In other words, concerns may arise if the researcher has abandoned all of their other modelling results simply as they have not yielded the desired answers and presents only the desired ‘rabbit’. In our view, best practice is to start with a general model incorporating potentially relevant variables and simplifying the model (ie, omitting variables which are not significant). This process should have close regard to model specification tests and explain why alternative models were rejected.

Alternatives: apples and oranges comparisons, assuming stable price-cost margins, and simulations

The Commission’s Guide also considers estimating counterfactual prices based on comparing price data between different but similar geographic or product markets on the basis that these alternatives may provide a yardstick for non-cartelised prices.²³

However, such methods may result in comparing ‘apples and oranges’, with estimates that are likely to be less accurate and more vulnerable to challenge. Comparator markets may also have been cartelised or subject to umbrella effects, thus understating the quantum of any overcharge.²⁴ Connor and Bolotova (2006) found that estimates based on this yardstick method (albeit often in an academic context) appear to systematically yield higher overcharges than other methods, which may raise concerns about accuracy.

The Commission also describes a cost-based approach where each cartelist’s costs are allocated to the relevant activity, and then a reasonable return added to derive a competitive price. However, cost allocation in itself requires a number of assumptions, as does determining a ‘reasonable’ return, and may require a level of detail in cost data that is not available. Moreover, a cost-based approach is only practical on a static basis, whereas firms’ costs, prices and profit margins are likely to fluctuate over time.

A third alternative that the Commission discusses is a more complex approach involving a simulation model, which aims to estimate demand for each cartelised product, as well as simulating how firms interact competitively and the shape of demand curves (particularly how customer price sensitivity varies as prices increase). The model could then estimate but-for prices that maximise profits given the demand and supply simulated. However, this is an assumption-heavy approach and risks a wide range of outcomes depending on the competitive models and demand assumptions adopted. It is one matter to use such simulations in the context of mergers to indicate whether there is appreciable upward pricing pressure due to the loss of rivalry,²⁵ and another to use such models to predict the actual price increases attributable to a cartel.

Therefore, the alternative methods outlined above should be used with care.

Sense and sensitivity checks: the first and second laws of economics

As a closing remark, there are two well-known laws of economics. First, for each economist there is an equal and opposite economist. Second, both of these economists are wrong. (Lawyers are undoubtedly the source of these laws!)

Returning to our initial theme, in a litigation setting where two economic experts disagree, the courts will wish to understand why the experts differ. Such differences can arise due to differences in data, underlying assumptions (which should thus be stated explicitly), and modelling techniques. Ideally, one would consider which of these factors drive the differences in the results and also assess the sensitivity of each expert's results to small changes in these inputs (eg, by considering the impact of applying one side's data to the other side's model). This would then highlight the matters where additional facts or justification may be required.

In this regard, it may also be instructive to compare:

- the but-for price with cartelists' input costs – for example, one might wish to revisit any overcharge estimates that assume that cartelists would otherwise have sold at prices below their input prices in the cartel period, but where this is not observed before or after the cartel; and
- the claimants' alleged lost profits during the cartel period with their profits before or after the cartel – again, one might wish to assess the credibility of damages estimates which suggest that in the absence of the cartel the claimants would have made higher profit margins than they achieved before or after the cartel.

Pass-on: who was harmed?

As outlined in the introduction, pass-on can affect both the distribution of harm from a cartel overcharge that is suffered by direct and indirect purchasers, and the overall quantum of damages across all purchasers.²⁶ While we comment on some of the factors that affect pass on, the key point is that this is a factual question, and theory (supplemented by market knowledge) is primarily useful when there are gaps in the data and to complement factual analysis.²⁷

Is the cartel industry-wide?

The key to determining the extent of any pass-on is assessing whether a firm could profitably do so. This will depend upon the extent to which sales will be lost from higher prices due to customers switching to alternatives or otherwise ceasing to buy. Accordingly, in our view, in many cartel cases the most important driver of pass-on is the extent to which the cartel led to industry-wide increases in the prices of cartelised input. If this is the case, then pass on is likely to be high because the only sales loss will be attributable to customers ceasing to buy, rather than switching to rival suppliers.

Assessing whether a cartel led to industry-wide increases in the prices of cartelised input is a factual question and will be influenced by factors such as whether:

- all suppliers were part of the cartel;
- some of the cartel members nevertheless 'cheated' on the cartel – such cheating could either occur directly, or if there were vertically integrated suppliers which continued to compete independently;²⁸ and
- non-cartel suppliers responded to the cartel by increasing their prices as well (ie, there were umbrella effects).

If a cartel only affects parts of an industry, rather than the industry as a whole, pass-on is likely to be more limited, since some competitors do not face higher input costs and therefore will be able to undercut.

The Commission's Guide goes as far as asserting that claimants 'will normally not be able to pass on this increase in cost (or only to a very limited degree)' if rivals were not similarly overcharged.²⁹ However, there are some obvious exceptions to this. For example, pass on may still be material if products are differentiated (so claimants may have some market power to pass on costs), there are

capacity constraints in the industry (that would prevent competitors from producing more to undercut those who do pass on higher costs) and any umbrella effects that in reality mean the overcharge is industry-wide.

Critical loss analysis, which seeks to compare the sales volume loss required for a price increase to be unprofitable with the expected actual loss from such a price increase, could also be considered to assess whether it would be profitable for a claimant to raise prices given its costs and gross profit margins.

Obtaining any empirical evidence on relative market shares, capacity and price elasticities in the industry would significantly help in assessing pass on.

Other factors influencing pass-on

A number of other factors may also affect the degree to which firms can pass on input cost increases.

If a cartel has industry-wide effects, the Commission's Guide states that perfectly competitive markets would pass on virtually all of the higher costs (since firms would be pricing at marginal cost already), whereas a monopolist facing linear demand and constant marginal cost would pass on around 50 per cent of any cost increase.³⁰ As noted above, the position is more complex if the cartel does not have industry-wide effects.

It is also important to consider how the claimants set their own prices. For example, it is even possible that there is greater than 100 per cent pass-on if the claimant sets prices based on a simple cost plus margin principle (where a 10 per cent increase in costs, for example, with a 10 per cent margin added on top, would result in a 110 per cent pass-on).

The duration and frequency of price-setting and interaction is also likely to affect pass-on. For example, if the claimant operates in a market based on long-term contracts, opportunities to pass on higher costs would be limited to when contracts come up for renewal even if costs do go up. Claimants are also less likely to pass on fixed costs in the short term since they are likely to compete on the marginal cost of producing an extra unit.

Empirical analysis

Ultimately, pass-on is an empirical question, since one is seeking to assess the extent to which, due to partial pass-on of cartel overcharges, the claimant suffered lower profit margins or lower volumes.

Information on whether (and, if so, how) any previous input cost increases were passed through could help provide evidence as to the extent to which a claimant was likely to pass on cartel overcharges. Again, it is important to distinguish between pass-on of industry-wide cost increases and firm-specific cost increases.

Other practicalities

Interest

Interest is typically allowable on damages claims, capturing the time opportunity cost of losses made in the past.³¹ Calculating the interest due is typically a relatively simple task, but it is important to use the right interest rate for the time period.

Whether interest should be applied on a simple or compounded (so that interest is received on previous interest accrued) basis is a legal issue, but one which could make a significant difference. For example, if the total damages without interest were £10 million and the annual interest rate were to be 10 per cent, after 10 years the simple interest would be £10 million, whereas compound interest would be approximately £16 million.

Tax

In a number of jurisdictions (including the UK), corporation tax rates have fallen over time which may reduce the quantum of the damages. For example, for companies facing the main corporate tax rate in the UK, the tax they would have paid on £10 million of additional profit in 1990 would be £3.4 million (34 per cent of £10 million); but if they were to receive £10 million of additional profit in 2014, they would pay £1.3 million less tax (21 per cent of £10 million is £2.1 million). Depending on the effective tax rates which companies actually face, declining rates of corporation tax may thus reduce the amount of damages companies need to receive to restore them to the same post-tax profits position they would have faced in the absence of the cartel.

Acquisitions and claims

A further factor that may reduce a claimant's damages claim is if they have been able to acquire another claimant for a lower purchase price, because the cartel had depressed that claimant's profits. However, the shareholders of that business may consequently wish to consider bringing a damages claim.

Conclusion

In conclusion, our key point is that recipe book analogies are particularly appropriate to damages claims, as good recipes are highly transparent as to how the results were derived. In particular, economic expert reports should specify a coherent and defensible counterfactual, be clear on the limitations of the available data, conduct sensitivity checks on the issues that particularly make a difference and fully consider pass on issues (as well as practicalities such as interest, tax and acquisitions). All of these steps are essential to deriving robust damages estimates.

Notes

- 1 For example, in *Devenish Nutrition Ltd and others v Sanofi-Aventis SA and others* (2008), damages claims were brought against the vitamins cartelists by both chicken-feed makers (ie, direct purchasers of the vitamins) and poultry producers and processors (indirect purchasers) in the England and Wales High Court. There may, of course, be tiers of indirect purchasers, all the way down to individual end consumers of finished products.
- 2 'Commission staff working document – practical guide: Quantifying harm in actions for damages based on breaches of Article 101 or 102 of the Treaty on the Functioning of the European Union' (the Commission's Guide).
- 3 See, for example Ashurst's 'European Private Enforcement – the Defendant's Perspective' (Chapter 2 of *The Private Competition Enforcement Review*, 2013) and Skadden's 'The European Commission's Proposed Directive on Private Antitrust Damages: A Balanced Approach' (ICLG 2014).
- 4 This is also set out in section 2.II.A of the Commission's Guide.
- 5 See the Commission's Memo 14/310 on frequently asked questions.
- 6 For example, in bringing a damages claim against gas-insulated switchgear cartelists, National Grid was reported by MLex to have been ordered by the England and Wales High Court to share £158,000 of costs incurred in documents disclosure by one of the cartelists (ABB).
- 7 See, for example, Inderst et al (2013).
- 8 For example, the Dortmund Regional Court ruled in a vitamins cartel claims case that a market price was generally lower than a cartel price. See Oxera's study for the Commission (2008), p92ff.
- 9 Oxera (2008), pp90–91.
- 10 Oxera reported that in this sample the European cartels had a mean overcharge of 27 per cent, but this was only based on a sample of six cartels.
- 11 On both points, see the Commission's Memo 14/310.
- 12 See, for example, Levenstein and Suslow (2006).
- 13 See part 2.II.A(2) and 3.II.A(2)a of the Commission's Guide.
- 14 For example, Connor (2004) found that, as regards the US *Lysine* cartel, there was actually explicit price fixing in the late 1980s before the start of the official cartel period (1992 to 1995), and there was also a brief price war during the official period (in 1993).
- 15 Section 45 of the Commission's Guide.
- 16 For example, in his expert report on the US vitamins cartel, Bernheim (2002) (cited in Davis and Garcés (2010)) did not use post-cartel prices to estimate but-for prices for vitamin A acetate 500 USP since there were only two producers and therefore it was argued that it was not reasonable to presume a reversion to normal competition at the end of the cartel. Harrington (2004) also posits there are incentives for ex-cartelists to keep prices higher after the cartel to minimise the size of penalties and damages.
- 17 See, for example, Friederiszick and Roeller (2010).
- 18 See part 2.II.B(2) of the Commission's Guide.
- 19 See, for example, Rubinfeld (2009).
- 20 See, for example, Bishop and Walker (2010), which contains a helpful annex that explains these issues in more detail.
- 21 A standard measure of goodness of fit is R^2 which, in broad terms, is a measure of the proportion of variation in the dependent variable explained by the independent variables.
- 22 Without going into technical detail, common problems include: autocorrelation, where error terms are linked to each other over time (or heteroscedasticity, where the average size of errors are linked over time) – these may suggest that one or more key variables have been omitted or model has been incorrectly constructed (specified), which invalidate assessments of statistical significance; collinearity, where one explanatory variable is correlated with another, making it difficult to determine their individual explanatory power precisely; and non-stationarity, where the distribution of data on a particular variable depends on what point in time is being considered.
- 23 See part 2.II.A(2)-(3) of the Commission's Guide. For example, Conduit Europe sought to claim damages from Telefónica based on an econometric model that took the UK as a comparator market (see, for example, Oxera (2008), pp48–49).
- 24 In trying to determine overcharge in the German cement cartel case (albeit as a basis for fines not damages), court-appointment experts explicitly did not adopt yardstick approaches due to the high likelihood of cartels in neighbouring countries (see Friederiszick and Roeller, 2009).
- 25 See, for example, 'Phase II EU Merger Control 2010-13: Lessons in Avoiding Surprises', ICLG, Hughes and Sandewall (2014).
- 26 The Ashurst (2004, p33ff) and Oxera (2009, p118ff) studies give good overviews of economic studies on the pass through of cost changes.
- 27 The UK Competition and Markets Authority has recently released a research paper on pass-on (RBB Economics (2014)), which concludes from its literature review that cost pass-on may vary substantially depending on a number of factors (including those covered here), suggesting a case-by-case assessment is required.
- 28 For example, Verboven and Dijk (2009) consider that this was a feature of the European vitamins cartel between 1989 and 1999, where Roche and Frank Wright were downstream premixers that were vertically integrated with vitamin producers and they continued to compete independently despite the cartel.
- 29 Section 169 of the Commission's Guide.
- 30 Section 170 of the Commission's Guide.
- 31 As the Commission's Guide mentions in section 20.



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Mat Hughes is a managing director in AlixPartners' European competition practice, which is part of a broader litigation practice. He has some 25 years of experience as an antitrust economist and in dealing with competition authorities and specialist utility regulators in relation to all aspects of competition law. Mat started his career as an economist at the UK Office of Fair Trading, and until March 2013 was chief economist at Ashurst LLP. Mat's experience includes a large number of cases covering competition economics matters, including market investigation, mergers and damages estimation.



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AlixPartners has a multi-disciplinary litigation practice covering economics, forensic accounting, and forensic data services (e-discovery and data analytics). Combined with AlixPartners' industry expertise, this wide-ranging capability allows us to create robust evidence and analysis on the issues that matter most to the case.

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AlixPartners' economics practice also engages in a range of other competition economics work. Members of the team are currently acting in relation to the European Commission investigation into credit default swaps and the UK Competition and Markets Authority investigation into payday lending. Recent mergers that the team have worked on include noteworthy second stage EU and UK mergers, namely: *Nynas/Shell*, cleared by the European Commission on the basis of the failing firm defence and merger efficiencies; and *Imerys/Goonvean*, cleared by the then UK Competition Commission, subject only to price caps on certain products for five years. The team also provides monitoring trustee services, which focus on the design and implementation of commitments.



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