CALCULATING CARTEL DAMAGES

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I INTRODUCTION

In this Chapter, the general and specific issues regarding the award of civil damages for cartel conduct are considered generally and in the United Kingdom ('UK') and European Union ('EU'), together with the techniques and approaches that have been used in litigation to estimate the losses.[1]

II LEGAL PRINCIPLES

Competition damages follow the common law principles governing damages in tort and contract.[2] The EU Damages Directive 2014/104/EU [3], which has been mostly transposed into UK law,[4] seeks to harmonise the law across the European Union.

Competition damages are compensatory. They are to award a sum of money that places the victim in the position he or she would have been in the absence of the illegal act. This means that a claimant cannot recover for any loss or damage that they passed on to their purchasers at higher prices or otherwise offset. The claimant is also entitled to interest for the period from the date on which the cause of action arose to the date of judgment.

The compensatory principle imposes an almost unbounded liability on defendants, as any person and, it appears, any loss that can be causally linked to the illegal act, is compensable. This is expressly

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1 For an extensive discussion of cartel damages, see Cento Veljanovski, *Cartel Damages: Principles, Measurement, and Economics* (Oxford University Press, 2020) ('*Cartel Damages*').

2 The right to compensation was first acknowledged in UK law in 1984 in *Garden Cottage Foods v Milk Marketing Board* [1984] AC 130. Yet it took a further two decades before an English court awarded damages for a breach of competition law (subsequently overturned) in *Crehan v Inntrepreneur Pub Co CPC* [2004] EWCA Civ 637.

3 Directive 2014/104/EU of the European Parliament and of the Council on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union [2014] OJ L 349 ('*EU Damages Directive*').

4 Transposed as Competition Act 1998 sch 8A for damage actions commenced in the UK after 9 March 2018.

stated in the Damages Directive Article 3(1) which gives the 'right to full compensation' to 'any natural or legal person who has suffered harm caused by an infringement of competition law'. Causation and the necessity to prove the loss can act to place limits on the extent of the defendants' liability. However, as discussed below, the courts generally apply weak causation tests that seek to establish a mere 'causal link' or 'foreseeability', rather than a stricter 'but for' analysis constrained by rigorous principles of remoteness and other limiting factors. Moreover, proving the loss while generally difficult is subject to a weak standard of proof partially in recognition of the difficulties of estimating past losses extending over long periods.

III. TYPES OF DAMAGES

The following types of damages are potentially available in a cartel damage action.

A. Overcharge Damages

The core of a cartel damage claim is the overcharges paid by purchasers; or, in the case of a buyer's cartel, the undercharges paid to suppliers. The UK Supreme Court has stated that pecuniary loss is measured by the overcharge[5] and there is no need to assess their impact on the claimant's profits. [6]

The 'overcharge' is the difference between the prices paid by purchasers and the prices which would have been charged in the absence of the prohibited conduct. The latter prices are variously referred to as the 'but for', 'counterfactual', or 'non-infringement prices. These prices are not observable and, therefore, cannot be stated with any certainty. Determining hypothetical prices is inherently difficult and contentious, both conceptually and because of data limitations. The central task of the claimant is to present evidence as to what these prices would have been using factual, statistical, and accounting techniques.

B 'Run-On' Damages

Most cartel damage actions follow on from a prohibition or settlement decision of the European Commission or national competition authority. The competition authority will base its finding on the duration of the cartel on documentary evidence that can withstand a challenge in the courts. However, there will often be good reasons why the effects of the cartel endure beyond the end date as determined in the prohibition decision. This can include sluggish price adjustments, continued oligopolistic pricing, tacit collusion (which is for the most part is not illegal), and/or because of the firm's participation in the cartel, it continues to understand its competitors' pricing policies.

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[5] *Sainsbury's Supermarkets Ltd (Respondent) v Visa Europe Services LLC and others (Appellants) Sainsbury's Supermarkets Ltd and others (Respondents) v Mastercard Incorporated and others (Appellants)* [2020] UKSC 24 [211]. (*'Sainsbury's UKSC Appeal'*) [199]

[6] '[T]he effect of breach on the overall profitability of the claimant … is not the relevant measure of damages.' *Sainsbury's UKSC Appeal'* [203].

Follow-on actions that also claim run-on damages for a period longer than stated in the prohibition decision are known as 'hybrid actions' combining elements of a follow-on action (which establishes liability) and a stand-alone action for the run-on period. The claimant has the burden of proof to establish that the cartel persisted after the end date found in the prohibition decision.

C 'Lost Profit' or 'Lost Volume' Damages

Claimants may also seek damages for lost profits. These will typically arise when a direct purchaser has passed on the overcharge in higher prices which reduce its sales. The lost sales are often referred to as the volume effect. The extent of this volume effect will depend on the demand and supply conditions in the downstream market. Similarly, an indirect purchaser who passes on all or part of an overcharge by higher prices will suffer reduced sales and have a lost profit claim on these. This involves a hypothetical calculation of losses arising from something that has not happened and therefore lacks data. Moreover, the English courts tend to treat such losses as secondary and speculative. As Longmore LJ said in *Devenish*, the 'loss of a possible sale is less serious than actual out-of-pocket loss'.[7] Nonetheless, where it is passed on then there are potential claims for lost profits.

There have been no UK cartel actions awarding 'lost volume' damages. In *BritNed v ABB*,[8] an action for damages arising from the defendant's participation in a bid-rigging cartel, the applicant sought lost profits arguing that, but for the overcharge, it would have commissioned a higher capacity cable which would have generated greater future profits. The claim was dismissed as too speculative.

D 'Umbrella' Damages

Following the European Court of Justice ('ECJ') decision in *Kone*, 'umbrella' damages can be claimed.[9] These arise where firms who are not members of the cartel raise their prices under the 'umbrella' of the higher prices charged by firms that are members of the cartel.

The ECJ held that the members of a cartel are vicariously liable for umbrella overcharges whether they knew that firms outside the cartel had raised their prices or not. The Advocate General's Opinion in *Kone* is more explicit stating that umbrella pricing is a reasonably foreseeable consequence of price-fixing and not the result of 'an entirely extraordinary train of events'.[10] She further expressed the opinion that the actions of the cartel which lead to higher prices being charged by non-cartel firms do not need to be the only cause of the claimant's loss if 'there is sufficient support for the assumption of a direct causal link if the cartel was at least a *contributory cause* of the umbrella pricing'.[11] The

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7 *Devenish Nutrition Ltd v Sanofi-Aventis SA (France)* [2008] EWCA Civ 1086, [148] ('*Devenish*').
8 *BritNed Development Ltd v ABB AB* [2018] EWHC 2616 (Ch), [464]ff ('*BritNed*').
9 *Kone AG v ÖBB-Infrastruktur AG* (European Court of Justice, C-557/12, EU:C:2014:1317, 5 June 2014) [34] ('*Kone*').
10 Opinion of Advocate General Kokott in *Kone AG v ÖBB-Infrastruktur AG*, C-557/12, EU:C:2014:45, 30 January 2014, [42] ('*Kone Opinion*').
11 Ibid [36].

ECJ[12] and Advocate General[13] further justified liability for umbrella pricing as necessary to ensure the effectiveness of EU competition rules by adding a further financial sanction to the European Commission's civil fines. To date, there has been no award of umbrella damages in the UK.

Damages for umbrella pricing are problematic. The defendants are liable to compensate purchasers who are not their customers, who they did not overcharge nor directly profit from the overcharge while leaving the excess profits of these overcharges in the coffers of the non-cartel firms because umbrella pricing is not illegal. In many jurisdictions, the fact that umbrella pricing arises from the independent action of a third party would be sufficient to break the chain of causation to deny damages.[14]

Paradoxically, the decision in *Kone* places the 'umbrella' firms in the preferred position of legally 'overcharging' their customers, keeping the profits, while being indemnified by members of the cartel. Arguably this indemnification will increase the prospects of umbrella pricing or ensure that future cartels include all substantial firms in the industry.

E 'Cost-Based' Damages

In several English cases, cost-based damages have been awarded.[15]

In *BritNed*,[16] the England and Wales High Court found that although the defendant was a member of the power cables cartel it had not overcharged the claimant. The Court nonetheless awarded two heads of cost-based damages, neither of which were pleaded by the claimant. The Court fixed on some fragmentary documentary evidence which suggested that the defendant had used thicker, more expensive, copper cables than its competitors and awarded damages for what it termed the 'baked-in inefficiencies'.[17] The Court also hypothesized that, because the members of the cartel had not needed to compete for business, they had reaped cost-savings in the forms of lower tendering costs and greater certainty, which should also be awarded as damages.

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12 *Kone* [33].

13 *Kone Opinion* [54].

14 Recent decisions by the US federal district courts have reasoned that 'the damages for an umbrella plaintiff would be unacceptably speculative and complex' because of the 'wide range of factors [that] influence a company's pricing policies' and that the non-cartel members' independent pricing decisions constitute intervening causes that break the chain of causation from price fixing to higher prices: *Garabet, v Autonomous Techs Corp.*, 116 F Supp 2d 1159, 1167–8 (CD Cal, 2000); *Associated General Contractors of California, Inc v California State Council of Carpenters*, 459 US 519 (1983).

15 In the retailers' interchange fee cases, the English court have used cost-based approaches to calculate the 'competitive' but for interchange fee: *Sainsbury's Supermarkets Ltd v MasterCard Inc* [2016] CAT 11 ('*Sainsbury's*'); *Sainsbury's Supermarkets Ltd v Visa Europe Services LLC* [2017] EWHC 3047 (Comm); *Sainsbury's Supermarkets Ltd v MasterCard Inc* [2018] EWCA 1536 (Civ) ('*Sainsbury's Appeal*').

16 See Cento Veljanovski, 'Damages for Bid-rigging—The English High Court's Idiosyncratic Cost-based Approach in *BritNed*' (2019) 10 Journal of European Competition Law and Practice 109; Cento Veljanovski, *Cartel Damages* [14.07]– [14.17].

17 *BritNed* [445].

Both these heads of damages were questionable. First, the Court's finding that the defendant had competitively priced its tender and that in negotiations had passed on the alleged cost savings in a lower price should have, arguably, been the end of the action. Second, as regards the 'baked-in' inefficiencies, the defendant continued to quote using thicker cables after the end of the cartel, indicating that this was a commercial decision unrelated to the existence of the cartel. Third, the Court had no direct or indirect evidence of the existence of any cost savings. Fourth, the cost-saving damages awarded were restitutionary in character, not compensatory.

On appeal, the court found that the trial judge had made 'an error of law',[18] in respect of his award of 'cost saving' damages in that these violated compensatory principles by looking at the defendant's alleged gains, rather than the claimant's losses. Further, the trial judge's attempt to translate the purported cost savings of other members of the cartel into an 'overcharge' by the defendant was found to be a mere assertion 'not open to the judge' and, in any case, the trial judge had expressly found that any cartel savings had been competed away in a lower price.[19] The Court of Appeal made clear that the exclusive focus of a damages award should be on the loss to the claimant and not the gains to the defendant. Accordingly, at least in English law, the award of cost savings damages is unlikely in the future, and those of baked-in inefficiencies, which were not there the subject of the appeal, remain available.

F 'Lost Chance' Damages and Future Losses

Future losses arising from lost chance, and lost opportunity damages, are, in principle, compensable. Lost chance damages are most applicable to market power violations where the dominant entity seeks to foreclose the market to its downstream competitors. These damages can also arise in cartel cases where, for example, the price overcharge is so great that it has damaged the purchaser's business generating continuing future losses; in bid-rigging cartels which prevent firms not a party to the cartel from securing a tender they would or most likely would otherwise have; or where the price-fixing is coupled with other anticompetitive abuses such as those claimed in *Devenish* (that several of the vitamins' cartelists who had downstream pre-mix businesses also operated a margin squeeze to foreclose the market to one of the claimants who was an independent pre-mixer).

Lost opportunity damages have been claimed in several actions. In *BritNed*, the claimant unsuccessfully sought lost chance damages arguing that, had the tender not been overpriced, it would have purchased a higher capacity submarine cable enabling it to generate more business and revenues.[20] They were also addressed in *Enron* (a discriminatory pricing case).[21] Before the UK

[18] *BritNed Development Ltd v ABB AB and ABB Ltd* [2019] EWCA Civ 1840 [235] ('*BritNed Appeal*').
[19] *BritNed Appeal* [165].
[20] [2018] EWHC 2616 (Ch), [464] ff.
[21] *Enron Coal Services Ltd (in liq) v English Welsh and Scottish Railway Ltd* [2009] CAT 36; *Enron Coal Services Ltd (In Liquidation) v English Welsh & Scottish Railway Ltd* [2011] EWCA Civ 2.

Competition Appeal Tribunal ('CAT' or 'Tribunal'),[22] and on appeal, the claimant could not establish on the balance of probabilities that it would have been awarded the contract but for the impugned conduct of the defendant. The CAT[23] applied the principles set out in *Allied Maples*[24] that the claimant must 'show on the balance of probabilities what it would have done, but for the infringement';[25] that where the 'loss depends on what a third party would have done, but for the abuse, then the applicant must satisfy the Tribunal on the balance of probabilities that there is a real or substantial (i.e., not negligible) chance that the third party would have acted in the way which the claimant asserts'[26]; and if these conditions are satisfied the court 'must then put a figure on what it has lost that depends on a realistic assessment of the prospects of a successful outcome'.[27] In *Albion Water*,[28] (a discriminatory pricing case), these principles were applied with damages reduced by 33 percent to reflect the 'prospects of a successful outcome', even though the CAT held that it was 'highly likely' that the contract would have been awarded to the claimant.

G Aggregate Damages

The UK's new collective proceeding regime allows for the award of aggregate damages in opt-in and opt-out actions. The award of aggregate damages does not need to be based on the aggregation of the individual losses of each member of the class. Rather, s 47C(2) of the Competition Act 1998 states: 'The Tribunal may make an award of damages in collective proceedings without undertaking an assessment of the amount of damages recoverable in respect of the claim of each represented person'.[29] Notwithstanding, the CAT in the *Merricks v Mastercard* collective certification proceeding held that aggregate damages had to be based on calculations of damages that were individually compensatory to members of the class.[30] This was rejected by the Court of Appeal[31] and by the majority judgment of the UK Supreme Court.[32] The CAT accepted that a top-down method could be used to calculate aggregate damages. It follows that this form of 'statutory' damages need not be based on compensatory principles. To date, there has been no award of aggregate damages.

H Damages which cannot be sought

[22] The CAT is a specialist tribunal dealing with competition cases with High Court status.
[23] *Enron Coal Services Ltd (in liq) v English Welsh and Scottish Railway Ltd* [2009] CAT 36 [85].
[24] *Allied Maples Group Ltd v Simmons & Simmons* [1995] 1 WLR 1602 ('*Allied Maples*').
[25] *Allied Maples* 1610G.
[26] *Allied Maples* 1614C.
[27] See *Mount v Barker Austin (A Firm)* [1998] EWCA Civ 277.
[28] *Albion Water Limited v Dwr Cymru Cyfyngedig* [2013] CAT 6, [220].
[29] Rachael Mulheron and Douglas E Edlin, 'The Mere Mirage of a Class Action? A Challenge to *Merricks v Mastercard Inc*' (2018) 37 Civil Justice Quarterly 216; Cento Veljanovski, 'Collective Certification in UK Competition Law: Commonality, Costs and Funding' (2019) 42 World Competition: Law and Economics Review 121.
[30] *Walter Hugh Merricks v Mastercard Incorporated* [2017] CAT 16.
[31] *Walter Hugh Merricks v Mastercard Incorporated* [2019] EWCA 674.
[32] *Mastercard Incorporated v Walter Hugh Merricks* [2020] UKSC 51 ('*Mastercard v Merricks*').

In line with the compensatory principles of damages, gains based, and punitive damages cannot be sought. Gain based damages – also called an 'account for profits' – are based on the ill-gotten gains or profits made by the defendants.[33] These were rejected, by the England and Wales High Court[34] and Court of Appeal in *Devenish*,[35] and the Court of Appeal in the *BritNed.*[36]

The EU Damages Directive provides that damages 'which lead to overcompensation, whether by means of punitive, multiple or other types of damages' are barred by the Damages Directive.[37] Exemplary damages which were available in the UK are also barred following the transposition of the Damages Directive in UK law.[38] Exemplary damages were awarded in *2 Travel* (a predation case) mainly because the actions of the defendant were blatant, its chief executive had misled the court, and it had not been fined by the UK competition authority.[39]

IV CAUSATION

To succeed in a damages action, the claimant(s) must prove that the losses were causally related to the illegal actions of the defendant(s). In *Manfredi*,[40] the Court of Justice of the EU gave any individual the right to claim compensation 'where there is a causal relationship between the harm and agreement, or practice prohibited provided that the principles of equivalence and effectiveness are observed'.

The English courts have traditionally limited liability through concepts such as foreseeability, remoteness, and causation to those most directly affected. To establish causation the English courts in line with most other jurisdictions have used the 'but for' test.[41] 'But for' causation applied literally would require the impugned conduct to be the sole and exclusive cause of the claimant's losses. This is a demanding test and is difficult to make good, particularly in the context of cartels. Accordingly, the English courts have not required that the harm be shown to be the sole, exclusive, or even substantial cause of the defendant's actions but that they merely be a contributory cause,[42] even if minor. US federal antitrust law adopts a similarly weak standard of causation.[43]

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33 *Devenish Nutrition Ltd v Sanofi-Aventis SA (France)* [2008] EWCA Civ 1086.
34 *Devenish Nutrition Ltd v Sanofi-Aventis (France)* [2007] EWHC 2394 (Ch).
35 *Devenish Nutrition Ltd v Sanofi-Aventis SA (France)* [2008] EWCA Civ 1086.
36 *BritNed Appeal* [2019] EWCA Civ 1840.
37 *EU Damages Directive* art 3(3)
38 Competition Act 1998 sch 8A s 36.
39 *2 Travel Group plc (in liq) v Cardiff City Transport Services Ltd* [2012] CAT 19.
40 Case C–295/04 *Manfredi v Lloyd Adriatico Assicurazioni SpA* EU:C:2006:461; [2006] ECR I–6619 [43]–[44].
41 *Enron Coal Services Ltd (in liq) v English Welsh and Scottish Railway Ltd* [2009] CAT 36 [85(a)]; *Arkin v Borchard Lines Ltd* [2003] EWHC 687 (Comm) [489]ff; *2 Travel Group plc (in liq) v Cardiff City Transport Services Ltd* [2012] CAT 19 [285]ff.
42 *Kone Opinion* [36].
43 Under the 'material cause' standard, it is 'enough that the antitrust violation contributes significantly to the plaintiff's injury even if other factors amounted in aggregate to a more substantial cause' Philip E

While the chain of causation must not be 'broken' to establish proof of a loss, this has been given an elastic interpretation. As already discussed the ECJ's preliminary judgment in *Kone*[44] overrode Austrian law by recognising liability for umbrella pricing, which would have been rejected under Austrian law because 'there is no adequate causal link between the cartel and the loss potentially suffered by a buyer, since it consists of an indirect loss: a side effect of an independent decision that a person not a party to a cartel has taken on the basis on his own business considerations'.[45] Specifically, the ECJ held that umbrella pricing was foreseeable[46] and liability would make a 'significant contribution to the maintenance of effective competition in the European Union'.[47] The principle of effectiveness is an additional requirement that is sued to override both the requirement of causation and the operation of national laws on causation.

V PROOF OF DAMAGES

The English courts take a 'pragmatic', 'generous' and 'evidence-driven'[48] approach to the quantification of damages. They have stated that: 'The Court will not allow an unreasonable insistence on precision to defeat the justice of compensating a claimant for infringement of his rights'.[49] This is the general common law position[50] that the courts will require 'as much certainty and particularity … as is reasonable, having regard to the circumstances and to the nature of the acts themselves by which the damage is done'.[51] Shaw L's statement in *Watson*[52] is now routinely cited in competition damage cases – that the amount of the loss should be quantified 'by the exercise of a sound imagination and the practice of the broad axe'. The 'broad axe' approach has been affirmed by the UK Supreme Court in *Mastercard v Merricks* as a general principle of quantification and pass-on – the court will 'do the best it can on the available evidence'[53] and 'resort to informed guesswork'.[54]

The *EU Damages Directive* reiterates a similar principle but from a different angle. It draws on the European law principle of effectiveness to direct that national rules should 'not be formulated or

Areeda, Roger D Blair, and Herbert Hovencamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (Aspen Law and Business, 2nd ed, 2000) [338a].

44 *Kone* [4].
45 *Kone* [14].
46 *Kone* [30].
47 *Kone* [23].
48 *Asda Stores Ltd v Mastercard Inc* [2017] EWHC 93 (Comm) (Popplewell J).
49 *Asda Stores Ltd v Mastercard Inc* [2017] EWHC 93 (Comm), [306(8)(b)].
50 *Chaplin v Hicks* [1911] 2 KB 786, 792 ('[t]he fact that damages cannot be assessed with certainty does not relieve the wrongdoer of the necessity of paying damages').
51 *Ratcliffe v Evans* [1892] 2 QB 524, 532–3.
52 *Watson, Laidlaw, and Co Ltd v Pott, Cassels, and Williamson* (1914) 31 RPC 104, 118 (HL). Lord Shaw's obiter in *Watson* related to the difficulties of quantifying future non-pecuniary losses and not past financial losses.
53 *Mastercard v Merricks* [47].
54 *Mastercard v Merricks* [48].

applied in a way that makes it excessively difficult or practically impossible to exercise the right to compensation guaranteed by the [Treaty of the Functioning of the European Union]'.[55] It then sets out statutory provisions that go further by requiring the national courts of the EU to establish a rebuttable presumption of harm (Article 17(2)) and a rebuttable presumption of pass-on where indirect purchasers use pass-on to mount a claim for damages (Article 14(2)). The practical effect of these presumptions is dubious since no default overcharge or pass-on percentages are specified. As Marcus Smith J in *BritNed* tersely observed: 'I fail to see how a bare presumption of harm — particularly one, which does not involve a presumed quantification of harm — takes matters any further at all'.[56] The Court of Appeal agreed adding that such a presumption was unnecessary given the generous approach of English law to the problems of proof.[57] The UK transposition of the *EU Damages Directive* does not contain an equivalent to Article 17(2).[58] The Hungarian competition act addresses this issue by setting out a rebuttable ten percent default overcharge rate.[59]

Most cartel damage claims are follow-on actions. They rely on an infringement decision of the European Commission or a national competition authority to establish liability and the nature of the impugned conduct.[60] They do not establish or quantify the losses or provide much useful information that would enable the calculation of damages. This is because the members of a cartel are prosecuted under the infringement by object provision of Article 101(1)TFEU which does not require proof of the adverse effects on competition or the quantification of harm, overcharges, or losses. Moreover, the increased use of settlements by the European Commission and national competition authorities means a published short-form decision that tersely describes the infringement with little discussion of the basis for and evidence supporting the infringement. Claimants can gain access to the competition authority's files which will contain useful information. However, typically the infringement decisions are of limited use in establishing quantum, and the claimants will have to seek disclosure from the defendants.

VI QUANTIFYING OVERCHARGE DAMAGES

55 See Cento Veljanovski, *Cartel Damages* ch 8.
56 *BritNed* [23(5)] (emphasis in original).
57 *BritNed Appeal* [42].
58 Competition Act 1998, Schedule 8A.
59 Competition Act 1996 s 88/C (applicable to damages arising after September 2008).
60 'The final decision of a competition authority should constitute full proof of an antitrust offence to establish an action for damages' Damages Directive, Article 9.1.

The core of any damages claim is the 'overcharge damages'. These give rise to at least two empirical tasks: first, to estimate the prices that would have existed in the absence of anti-competitive conduct; and second, to determine the duration of the cartel.[61]

A Counterfactual Prices

Determining the prices in the absence of the cartel is a difficult empirical inquiry, not least because these prices are hypothetical. In most markets, prices are affected by myriad factors and market forces. Even if there is direct evidence that the members of the cartel agreed to raise prices by a stated amount, this may not have taken place because of failure to implement these, cheating by members of the cartel, and/or because the agreed price increases could not be sustained in the face of opposing market forces. The problem is compounded where the cartel is formed to arrest the decline in prices, in which case the 'overcharge' is a smaller reduction in prices than would have occurred in the absence of the cartel.

There are other economic, factual, and legal difficulties surrounding the estimation of overcharges. In law, the but for prices are those that would have prevailed in the absence of the illegal cartel. Yet, to others, it is something more theoretical. Some economists argue that the appropriate but for prices are the competitive prices or the prices equal to the firms' marginal costs plus a competitive profit margin. This approach assumes that the market would have been effectively competitive in the absence of the cartel, which invariably will not be the case. Markets that have been cartelised tend to have a small number of large firms (oligopolies) in which prices will be above textbook competitive levels without explicit coordination between the firms, and other factors may cause markets to depart from competitive prices.

Further, the method used to identify counterfactual prices, and hence overcharges, must adjust for the non-cartel factors. A cartel will not be the only factor affecting prices and sales during the cartel period. Nor will the counterfactual prices be some constant price lower than the cartel's prices. Both factual and counterfactual prices will be affected and fluctuate over the cartel period due to the influence of both cartel and non-cartel factors. These fluctuations may be due to changes in the economy and/or the industry, the latter due to the entry of a new firm, import competition, technical developments, increases in input costs, industrial actions, weather, price wars, and so on. The parties, and particularly the claimants' experts, will need to disentangle the price effects of cartel and non-cartel factors to give plausible estimates of the non-infringement prices and overcharges.

[61] Published estimates of percentage overcharges vary considerably ranging from zero to 40 percent and larger. The methods used and resulting analysis have been controversial and subject to conflicting analysis and interpretation. For a review of the publicly available research, see Cento Veljanovski, *Cartel Damages* [3.01]–[3.30].

There are other complications. For some cartels, the primary goal is to arrest the decline in prices. This in principle does not pose a problem but makes identification of the effects of the cartel more difficult e.g., how would prices have fallen in the absence of the cartel and by how much. Further a 'price increase' can be implemented without increasing prices but by lowering the quality and quantity of the product supplied, so-called shrinkflation. The illegal action of the parties does involve overt price setting.

Another complication is where the discussion between the parties sets gross or list prices. These are not the transaction prices charged to customers which are affected by discounts, rebates, and negotiations. The claimant must establish a positive relationship between gross and transaction prices either directly, or by showing that the latter was affected by the actions of the cartel. A similar but more severe problem arises when the impugned conduct is information exchange and/or collusion on non-price factors such as customer and market sharing arrangements. Again, this requires claimants to establish that the shared information and/or market sharing arrangement affected prices and then estimate the amount of the overcharge.

B Quantification Techniques

The empirical techniques which can be used to estimate overcharges and pass-on have been set out in numerous publications.[62] These include the non-binding European Commission's practical guidelines on the quantification of competition damages ('*EU Practical Guidelines*')[63] and its guidelines on pass-on to indirect purchasers ('*EU Pass-on Guidelines*').[64] These EU guidelines are addressed to the national courts to describe the methods that can be used together with their pros and cons.

The methods that can be used to quantify overcharges and volume effects can be classified in different ways. The *EU Practical Guidelines* classifies these as 'comparator' (before-and-after and yardstick) and other methods (cost-based, simulations, and yet others). It identifies two comparator methods – the 'before-and-after' which uses prices or profit margins before and after the cartel period to determine whether prices or margins during the cartel period were relatively higher; and the 'yardstick' method which measures the overcharge by comparing the prices of the cartel with the prices for the same product in a similar geographical or product market not affected by a cartel. The

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[62] European Commission, *Quantifying Antitrust Damages: Towards Non-binding Guidance for Courts* (Report prepared by Oxera, December 2009). Also, Cento Veljanovski, *Cartel Damages*; *Proving Antitrust Damages: Legal and Economic Issues* (3rd edn, American Bar Association, 2017).

[63] European Commission, *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* (Staff Working Document, C(2013) 3440) ('*EU Practical Guidelines*'); Communication from the Commission on Quantifying Harm in Actions for Damages Based on Breaches of Article 101 or 102 of the Treaty on the Functioning of the European Union [2013] OJ C 167/19.

[64] [2019] OJ C 267/4. See also European Commission, *Study on the Passing-on of Overcharges*, (Final Report prepared by RBB Economics, 2016).

'other' methods include 'cost-based approaches which use the defendant's costs plus a competitive profit margin to derive the but for prices, simulations, and 'economic theory' which model market outcomes. Different techniques can be used in the quantification including econometrics (statistical) and accounting analysis'.

The most common method used to estimate the overcharge is the straight-line before-and-after approach.[65] This can use one or more of the observed prices as a proxy for the non-infringement prices, such as the: prices before the start of the cartel; prices after the end of the cartel; the average of the prices before and after the cartel; prices derived from a straight-line projection between before and after cartel prices; the prices from one or several price wars during the cartel; or the prices adjusted for non-cartel factors affecting prices during the cartel such as costs, foreign exchange movements, and so on.

The problem with the straightline method is that it fails to take into account the myriad factors influencing cartel and non-infringement prices. Further, the choice of non-cartel prices can have a dramatic effect on the overcharge estimate and may not be representative of the non-infringement prices. To illustrate, consider the damage action brought in the High Court of Western Denmark[66] against members of the pre-insulated pipe bid-rigging cartel.[67] The applicants used the price of the first awarded tender after the end of the cartel adjusted for annual changes in the costs of iron, steel, plastic, and wages used in the production of preinsulated pipes to conclude that the non-infringement prices were on average 35 percent to 40 percent lower than those during the cartel period. The defendants argued that the higher prices before the cartel period were more representative because demand had fallen off significantly during the cartel period. This reduced the overcharge claim by 80 percent. The court in a wholly arbitrary but practical compromise awarded damages based on the average of the two estimates.[68]

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65 A review of all decided cartel damage cases in the 27 EU Member States plus Norway and Switzerland to end August 2019 found that in the 59 decisions which awarded damages most used simple before-and-after comparisons (31 cases); cost-based and financial methods (9 cases); yardstick comparisons (four cases); of the remaining 19 cases, in 10 Spanish judgments, the courts estimated the overcharge by reference to the *EU Practical Guidelines*; and four German judgments relied on damages for contravention of competition rules set out in liquidated damage clauses. Jean-Francois Laborde, 'Cartel Damages Claims in Europe: How Courts Have Assessed Overcharges (2019 ed.)' (2020) 4 Concurrences 1; Jean-Francois Laborde, 'Cartel Damages Claims in Europe: How Courts Have Assessed Overcharges' (2018 ed.)' (2019) 1 Concurrences 1. John M Connor, *Price Fixing Overcharges* (Purdue University, 4th ed, 2019) Table 13.

66 Based on the discussion in Peter Møllgaard, 'Assessment of Damages in the District Heating Pipe Cartel' in Bruce Lyons (ed), *Cases in European Competition Policy: The Economic Analysis* (Cambridge University Press, 2012) 159.

67 Case No IV/35.691/E-4, Pre-Insulated Pipes [1999] OJ L 24/1.

68 *EU Practical Guidelines* [125] states 'it is normally not appropriate to simply take the average of the two results, nor would it be appropriate to consider that the contradictory results cancel each other out in the sense that both methods should be disregarded'.

Another approach is to benchmark the cartel's prices against the prices for the same or very similar products that have not been cartelised. This in principle would adjust for non-cartel factors provided the two products or geographical markets were similar in other respects.[69] However, it is rare to find two markets that are similar in all respects other than the cartel, although it is possible to adjust for some differences between the two markets.

C. Econometric and Statistical Approaches

Econometrics has been used to estimate overcharge damages.[70] It can rigorously adjust for the non-cartel factors which affect prices to arrive at the counterfactual price. The downside of econometrics is that it is often compromised by insufficient data, a small sample size, a host of statistical issues, and may be difficult for the court to evaluate. The English courts however have not shied away from accepting and critically evaluating econometric evidence of cartel overcharges. In *BritNed*[71] the judge comprehensively evaluated the claimant's econometric evidence.[72] The trial judge also held a half-day teach-in on econometrics by the parties' experts during the trial for them to explain the statistical techniques which were used.

In *BritNed* the claimant's econometric evidence consisted of a single during-and-after price regression. This estimated ABB's overcharge during the cartel period by reference to its prices after the cartel period. To adjust for other factors that would have affected prices the price regression was estimated using the ordinary least squares (OLS) statistical technique. The cartel effect on prices (as measured by the contract values) was captured by a dummy variable which took the value of 1 for contracts awarded during the cartel period and zeroes for contracts awarded after the cartel had ended. Several 'control variables' were used to take account of the effect on the contract prices of the non-cartel factors such as costs, the difference between underground and submarine cable projects, demand, and a time trend.

In *BritNed* the claimant's econometric analysis was rejected as 'too complex' and 'unspecific'.[73] It is instructive to see how the judge dealt with the econometric evidence. He identified several concerns. The first was the small sample size. The claimant's economist used both ABB's underground and submarine projects. The court concluded that the former should be excluded thus halving the sample size which was already small. This resulted in the cartel dummy having a large standard error so that it lacked what statisticians call 'precision'. As the judge observed 'the

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69 For a statistical example of the difference in difference approach, see Ulrich Laitenberger and Florian Smuda, 'Estimating Consumer Damages in Cartel Cases' (2015) 11 *Journal of Competition Law and Economics* 955.

70 See Cento Veljanovski, *Cartel Damages* chs 15, 16; see also American Bar Association, *Econometrics: Legal, Practical and Technical Issues* (2nd edn, American Bar Association, 2014).

71 *BritNed* [416].

72 See Cento Veljanovski, *Cartel Damages* 'Box 14.4', [16.08]– [16.17].

73 *BritNed* [417].

confidence interval of the model is scarcely impressive'. The estimated average overcharge was around 22% but there was a 95% chance that the true value lay between 0.32% and 39% implying losses anywhere between €885,000 to €108.7 million. This 'shocked' the judge who concluded that it was 'an indicator that the model is not producing useful outcomes such that I can rely upon.' The court then considered the 'robustness' of the claimant's regression results. Robustness consists of an assessment of how sensitive the estimated overcharges are to changes in the variables and/or time periods used in the regression equation. Both experts carried out sensitivity tests although the judgment focused on those of the defendant's economist. These involved excluding in turn and separately cartel projects other than the BritNed project, underground cable projects, the time trend, and 'order backlog' variable (used as a measure for demand conditions facing ABB). With one exception these reduced the estimated overcharge and rendered it statistically insignificant. This by itself was not a matter of concern. As the judge commented: 'If the parameters are material … their removal from the model will make a difference.'[74]

The killer blow for the econometrics came from elsewhere. The judge said, 'the fragility of the model is in large measure hidden by … [the] use of averages.'[75] A regression using a cartel dummy variable estimates an average overcharge over all cartel period projects which the claimant's expert used 'to compute the overcharge for the specific case, the BritNed project'. As the judge commented 'given the bespoke and unique nature of these projects, I find that an overcharge calculated by a model that is explicitly averaging across multiple projects to be an inappropriate one'.[76] This was a valid criticism given the highly differentiated nature of ABB's projects. Lumping them together and suggesting that the average overcharge applied to any one project is hard to defend.

BritNed is not a setback for the econometric approach, but simply the rejection of the claimant's econometric evidence. As stressed by the judge it was applied to contracts that were 'bespoke' and not as typically used for large data sets of relatively homogeneous products sold in volume.

BritNed points to the need to treat statistical evidence as complementary to and ensure that it is consistent with the documentary and other evidence. It is apparent from the trial judge's subsequent extra-judicial comments that he regarded the econometric evidence to be 'idiosyncratic' and not compliant with the law of evidence.[77] Notwithstanding this, the courts are increasingly prepared to accept econometric evidence. However, it is likely to be treated with more scepticism if only because of the inherent tendency of lawyers and judges to look in detail at the facts and evidence rather than models and systematic trends in large data sets. It is therefore necessary that the method used to

[74] *BritNed* [379] (emphasis in original).
[75] *BritNed* [418].
[76] *BritNed* [421].
[77] Marcus Smith, 'Lawyers Come from Mars, and Economists Come from Venus: Or is it the Other Way Around? Some Thoughts on Expert Economic Evidence in Competition Cases' (2019) 18 Competition Law Journal 1, 6.

estimate overcharges be consistent with the facts and witness evidence. To treat a piece of statistical analysis as the sole and a determinative piece of evidence invites disaster (as happened to the claimant in *BritNed*). More rigorous methods are just part of the mosaic of evidence needed to support a competition claim.

D Cartel Duration

Most UK and EU cartel damage actions are 'follow-on' actions. These follow from and are based on the findings of fact and law in an infringement decision of a competition authority. The claimant(s) in a 'follow-on' action will rely on the competition authority's findings as to the start and end dates of the cartel. These dates may not reflect the true dates at which the cartel started and ended; they are those that the competition authority can prove based on documentary or witness evidence such as emails, meeting notes, and so on, that have been discovered during an investigation, and the European Commission can defend if challenged in court. The cartel may have started earlier, operated for a shorter period, or continued to maintain prices at a high level after the end of the infringement period.[78] Indeed, the European Commission often notes in its decisions that a cartel may have operated before the dates it has determined, for example, the 'amino acid cartel'.[79]

It is now usual for claimants to bring a 'hybrid action' which uses the dates for the cartel as determined in a competition authority decision plus 'run damages' for the overcharges and other losses that occurred after the legally determined end date of the infringement.

The start and end dates are crucial to the various methods available to estimating overcharges. If the wrong dates are used the amount of the overcharges will be either overestimated or underestimated depending on the real duration of the cartel and the way prices varied during these different periods. For some methods of calculating the overcharges, the use of incorrect dates can have a major effect, particularly the 'before-and-after' approach which assumes that the pre-cartel prices and/or post-cartel prices are an indication of the counterfactual prices during the cartel period. If this is incorrect, it results in a compound error — the wrong percentage overcharge applied over the wrong period.

It is therefore prudent for the claimants (and defendants) to explore different start and end dates for the cartel based on the available data. There are statistical techniques that can and have been used. For example, an econometric analysis of US vitamins prices found statistically significant evidence that prices before 1989 when the European Commission dated the start of the 'vitamins cartel', and as early as 1985, were collusive prices, and that price increases after 1985 could not be explained by cost and demand factors alone.[80] A statistical analysis of the sodium chlorate cartel found that the

[78] See John E Harrington Jr, 'Post-Cartel Pricing During Litigation' (2004) 52 Journal of Industrial Economics 517.
[79] Case COMP/36.545/F3, Amino Acids [2001] OJ L 152.
[80] Robert C Marshall, Leslie M Marx, and Matthew E Raiff, 'Cartel Price Announcements: The Vitamins Industry' (2008) 26 International Journal of Industrial Organization 762.

cartel operated for a longer period than set out in the European Commission's prohibition decision (specifically, January 1995 to February 2002, compared to the infringement period of September 1994 to February 2000). As a result, the authors of the study estimate that using the European Commission's dates resulted in estimated damage estimates over 28% smaller because the overcharge estimates and duration were both smaller than using the effective dates.[81]

There is a second, practical consideration. While the legal concept of a cartel is a single and continuous event, in practice, many cartels operate episodically in reaction to internal and external disruptions. Cartels are susceptible to defections and cheating which can cause a complete breakdown of their price-fixing policy and the flareup of a price war. External factors can also buffet a cartel and its prices, such as the entry of a new firm or plant, technical innovation, import competition, cost shocks, and so on. As a result, there may not be one continuous period, but several cartel 'episodes' reflecting major changes in market and cartel specific factors. For example, a cartel may form with five firms, then react with a price war to deter the entry of the credible competitor which fails and is then resolved by admitting the entrant into the cartel. This suggests not fewer than three, distinct cartel episodes where the factors determining prices, and amount of the overcharges, will most likely differ.

VII PASS-ON, MITIGATION, AND OFFSETS

Where a claimant has been able to pass on the overcharge at higher prices to its customers or otherwise reduce its losses these should be offset against or netted from the amount of damages.[82] This appears now to extend beyond pass-on to the efforts of purchasers to reduce their costs in response to an overcharge.

A. Pass-On

The *EU Damages Directive* has as its principal concern the avoidance of overcompensation. It thereby gives the erroneous impression that a purchaser will be overcompensated if it has been able to pass-on the overcharge and this is ignored by the courts. This is incorrect because a concomitant of pass-on is an additional lost profits claim. As the *EU Pass-on Guidelines* state 'there is an inherent link between the underlying price effect and volume effect. Therefore, if passing-on becomes relevant, both effects and their interaction should be taken into account.'[83] 'The volume effect can

[81] H Peter Boswijk, Maurice J G Bun, and Maarten P Schinkel, 'Cartel Dating' (2018) 34 Journal of Applied Econometrics 1.

[82] Pass-on is extensively discussed in Cento Veljanovski, *Cartel Damages* chs 18–21; Cento Veljanovski, 'The Law and Economics of Pass-on in Price Fixing Cases' (2017) 38 European Competition Law Review 209. See also Magnus Strand, *The Passing-on Problem in Damages and Restitution under EU Law* (Edward Elgar Publishing, 2017).

[83] *EU Pass on Guidelines* [(16)].

be described … as the harm that is caused by the fact that fewer of the products or services are purchased as a result of the overcharge.'[84] Put more technically because most products exhibit a downward sloping demand curve, the higher the price the smaller quantity of the product that is purchased. This means that where a defendant pleads pass-on it necessarily accepts that purchasers' sales have been reduced and invites a lost profits claim.

The pass-on defence was firmly established in the UK in *Sainsbury's* and is routinely pleaded in cartel damage cases.[85] The Tribunal in *Sainsbury's* set out a two-part test:

1. 'the pass-on defence is only concerned with identifiable increases in prices by a firm to its customers' which 'must be causally connected with the overcharge, and demonstrably so'; and
2. 'where, on the balance of probabilities, the defendant has shown that there exists another class of claimant, downstream of the claimant(s) in the action, to whom the overcharge has been passed on'.[86]

This test has already been heavily circumscribed. On causation, the Court of Appeal commented that the defendant could 'establish' 'a sufficiently close causal connection between an overcharge and an increase in the direct purchaser's price 'by a combination of empirical fact and economic opinion evidence'.[87] Also while the Court of Appeal was not required to decide the issue, it rejected the second part of the test as 'not an essential condition' and 'inconsistent with the principle that damages are compensatory.'[88]

The UK Supreme Court in *Sainsbury's v Visa & Mastercard* further clarified the legal position on pass on:

- Pass-on is required by the compensatory principle and to avoid double recovery.[89]
- Defendants have the legal burden to plead and prove pass on.[90]
- Once the defendants have raised the issue of mitigation, in the form of pass-on, there is a heavy evidential burden on the claimants to provide the evidence as to how they recovered their costs as the relevant information 'is exclusively in their hands'.[91]

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84 *EU Pass on Guidelines* [(15)].

85 The CAT in *Sainsbury's* [484(3)] questioned whether pass-on was a 'defence': '[t]he pass-on "defence" is in reality not a defence: it simply reflects the need to ensure that an applicant is sufficiently compensated, and not over-compensated, by a defendant' but then referred to it as defence. *Sainsbury's UKSC Appeal* [211] has affirmed it as a defence.

86 *Sainsbury's* [484] (emphasis in original).

87 *Sainsbury's Appeal* [332].

88 *Sainsbury's Appeal* [338].

89 *Sainsbury's UKSC Appeal'* [197]

90 *Sainsbury's UKSC Appeal'* [324]; EU Damages Directive Article 13 ('The burden of proving the overcharge was passed on shall be on the defendant').

91 *Sainsbury's UKSC Appeal'* [216]. *Royal Mail Group Ltd, BT Group & Others v Daf Trucks Ltd & Others* [2021] CAT 10 [Judgment: Expert Evidence and Amendment] on the proportionality of further disclosure and expert evidence

- The broad axe principle applies to the quantification of pass-on.[92] The law does not require unreasonable precision in the proof of the amount of the loss passed on to suppliers and customers.[93]
- The degree of precision requires a balance between achieving justice by precisely compensating the claimant and dealing with disputes at a 'proportionate cost'. 'The court and the parties may have to forgo precision, even where it is possible if the cost of achieving that precision is disproportionate, and rely on estimates'.[94]
- A greater degree of precision in the quantification of pass-on is not required from the defendants than the claimants.

B. Mitigation and Other Offsets

In *Sainsbury's,* the Tribunal identified other offsets which could reduce the claimant's award of damages[95]:

> When faced with an unavoidable increase in cost, a firm can do one or more of four things:
> (1) It can make less profit (or incur a loss or, if loss making, a greater loss).
> (2) It can cut back on what it spends money on – reducing, for example, its marketing budget; or cutting back on advertising; or deciding not to make a capital investment (like a new factory or machine) or shedding staff.
> (3) It can reduce its costs by negotiating with its own suppliers and/or employees to persuade them to accept less in payment for the same services.
> (4) It can increase its own prices, and so pass the increased cost on to its purchasers.

Sainsbury's has been read setting out a general principle of mitigation in cartel damage cases – whether by pass-on of the overcharge and/or where the purchasers' reduce costs. This has given the green light to defendants to take account of the wider and inter-market effects. For example, some defendants in the UK truck's damages litigation before the CAT have (at least initially) pleaded that in addition to pass on, pass-back and cost savings, and savings due to lower trailer prices should also be offset against the overcharge claim. The last offset is based on the propositions that because trucks and trailers are complements the reduced sale of trucks (volume effect) would also reduce the purchases of complementary inputs, such as trailers, and thereby the price of trailers. The savings from cheaper trails should, it is claimed, be deducted from the overcharge damages.

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92 *Sainsbury's UKSC Appeal'* [175]ff.
93 *Sainsbury's UKSC Appeal* [225].
94 *Sainsbury's UKSC Appeal* [217].
95 *Sainsbury's*' [434] & [455]. Lawrence Kotlikoff & Laurence Summers, 'The Theory of Tax Incidence' in Alan J. Auerbach and Martin Feldstein, eds., *Handbook of Public Economics—Volume II* (Elsevier, 1987) Chap. 16; Joseph E. Stiglitz, *Economics of the Public Sector* (2nd edn, Norton, 1988) Part 4.

The CAT's discussion in *Sainsbury's* can be recast in terms of the three ways a profit maximising firm can react to an overcharge – the cost effect, pass-on, and the volume effect.[96] The last two have already been discussed. The cost effect (or what can be called 'pass-back') consists of several elements. An overcharge increases the purchaser's costs of production and the relative price of the cartelised input. Where possible a profit maximising firm will substitute to cheaper inputs (substitutions effect). The overcharge will also decrease the purchaser's ability to purchase all types of inputs (output effect). These two effects will raise the firm's marginal costs which will further decrease the demand for both the cartelised and other inputs (the profit maximising effect). The 'cost effect' is the outcome of these three adjustments.

The cost effect interacts with the pass-on and volume effects. The cost effect leads to an increase in the firm's marginal cost by less than the overcharge, and as a result, decreases the pass-on and the volume effects. The purchaser will pass-on all or part of the cost savings, the proportion depending on supply and demand conditions for its product(s). If the counterfactual is a perfectly competitive market the entire cost savings would be pass-on so that the amount passed would be net of the mitigated costs, and the volume effect will be smaller.[97] Secondly, and harder to incorporate in any damages measure, is that because of the overcharge the purchaser has adopted inefficient production methods using too little of the cartelised input and too much substitute inputs. This is a real loss and jars with the justifications for a duty to mitigation which is to reduce 'economic waste'.

C. Proof of Pass-On and Mitigation

While the broad axe approach applies to the quantification of pass-on and other mitigating factors, it must be recognised that these raise the complexity, difficulty, and costs of mounting a damages action. It requires the defendant and claimant to trace the proportion of the overcharge that has been passed through the different downstream tiers of the supply chain. The factual issues are compounded when the second tier and subsequent tier of indirect purchasers bring an action. For the courts and defendants, it leads to practical problems and necessity to ensure that the defendants in aggregate only pay the losses they have imposed and no more; and the delays inherent in having to determine multi-layered litigation. This is combined with the experience in the UK of interminable interlocutory actions and appeals. This requires active case management by the courts to avoid litigation chaos and, from that, fears that the integrity of the justice system may be brought into question.

The *EU Damages Directive* attempts to deal with the evidentiary problems surrounding pass-on. These include pre-trial disclosure, a rebuttable presumption of pass-on for indirect purchasers' claim,

[96] Frank Verboven and Theon van Dijk, 'Cartel Damage Claims and the Passing-on Defence' (2009) 57 *Journal of Industrial Economics* 457.

[97] There will be estimation problems. If an econometric approach is used the cartel will affect both the price and cost variables, and this will need to be considered in the specification of the estimating equation.

published *EU Pass-on Guidelines*[98] to assist the courts with the quantification of pass-on, and gives the national courts the power to estimate losses and, where feasible, to seek assistance from the respective national competition authority. Whether these amount to an effective package to overcome quantification problems is doubtful, not least because claimants are still left with the burden of proof and need to quantify the losses.

While the consistency of pass-on with the compensatory principle is unassailable this must be tempered by the practicalities of litigation. Allowing pass-on and indirect purchaser actions risk less compensation because it fragments claims and pushes the losses downstream to second or third-tier indirect purchasers that suffer minor individual losses that most likely will not warrant bringing a claim unless in aggregate sufficient to attract third-party litigation funding to mount a collective action. This works against the compensatory function of damage actions and its complementary role of enhancing the deterrent effects of anti-cartel laws and civil penalties.[99]

Quantifying pass-on is difficult and will invariably be crude. The Tribunal in *Sainsbury's* accepted this: 'The problem is that it can be very difficult to ascertain whether and, if so, how, a given cost has been passed-on'.[100] It quotes White J's US Supreme Court judgment in *Hanover Shoe*[101] which stressed the 'insuperable difficulty' of establishing the 'unascertainable figures' required for pass-on so that the task would 'normally prove insurmountable'. *Hanover Shoe* resolved these evidentiary problems by rejecting the pass-on defence in US Federal antitrust law. *Illinois Brick*[102] cemented this by refusing standing to indirect purchasers under US Federal law. While these judgments and reasoning are widely cited, they mislead as to the legal position in the US. Even under Federal antitrust law, the defendants can argue pass-on where the direct purchaser has a pre-existing fixed quantity 'cost plus' contract with an indirect purchaser. Also, over half the US states have amended their respective state antitrust laws by enacting so-called '*Illinois Brick* repealers' that allow indirect purchasers' claims.[103]

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98 *Guidelines for national courts on how to estimate the share of overcharge which was passed on to the indirect purchaser* [2019] OJ C 267/4 ('*EU Pass-on Guidelines*'). See also European Commission, *Study on the Passing-on of Overcharges,* (Final Report prepared by RBB Economics, 2016).

99 Michael D Hausfeld, Laurence T Sorkin, and Irving Scher, 'Litigating Indirect Purchaser Claims: Lessons for the EU from U.S. Experience' (2017) 37 Antitrust 58.

100 *Sainsbury's* [434].

101 *Hanover Shoe Inc v United States Machinery Corp.* 392 US 481, at 491-494. White J focus was on the deterrence role of private actions in US antitrust stating that they would be 'more effectively enforced by concentrating the full recovery for the overcharge in the direct purchasers rather than by allowing every plaintiff potentially affected by the overcharge to sue for only the amount it could show was absorbed by it.'

102 *Illinois Brick Co. v Illinois* 431 U.S. 720 (1977) 735.

103 The federal prohibition does not apply to states as held by the US Supreme Court in *California v ARC America Corporation*, 490 US 93 (1989). For a survey of state law, see Phillip E Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (Wolters Kluwer, 4th ed, 2019).

In the UK and EU pass-on is a defence and indirect purchaser claims are permitted. The *EU Pass-on Guidelines* set out the quantitative methods which can be used to identify and quantify pass-on (but not cost mitigation). These for the most part are like those used to quantify the overcharges and stated in a general and theoretical manner. This has limited the practical usefulness of the guidelines. However, it also reflects the complexity of pass-on. The emerging practice has been to rely on more informal approaches such as economic theory and accounting methods[104]that trace the way purchasers recovered their costs during the cartel period.

VIII CONCLUDING REMARKS

The law of cartel and competition damage is in its infancy and evolving. The discussion above outlines the state of play at the beginning of 2021. The development and experience with competition damages will be rapid especially in light of the huge amount of litigation over the trucks' cartel across Europe. Moreover, it will be interesting to see whether and how UK law will differ from that within the European Union following Brexit. One of the ironies of Brexit is that the *EU Damages Directive* is an attempt by the European Commission to anglicize cartel damages law and procedures within the EU.

[104] A good example of the use of basic economics to establish pass-on can be found in tax cases e.g. *The Berkshire Golf Club, The Glen Golf Club, The Wilmslow Golf Club v The Commissioners for Her Majesty's Revenue & Customs* [2015] UKFTT 0627 (TC) [56]ff.