

Selective price cuts and fidelity rebates

Economic discussion paper

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by RBB Economics

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FOREWORD

This report was commissioned by the Office of Fair Trading (OFT) from RBB Economics. They were asked to prepare a report laying out clearly the economic theory of the anti-competitive effects of selective price cutting and loyalty rebate strategies and their potential benefits as well as suggestions on how to analyse such conduct.

Any views expressed in this report are those of RBB Economics and do not necessarily reflect the views of the OFT nor the legal position under existing competition law which the OFT applies in exercise of its competition law enforcement functions.

This report is part of the OFT's Economic Discussion Paper series, and is intended to inform current discussion within the competition policy community in the UK about selective price cutting and loyalty rebates. If you would like to comment on the paper, please write to me, Amelia Fletcher, at the address below. The OFT welcomes suggestions for future research topics on all aspects of UK competition and consumer policy.

Dr Amelia Fletcher
Chief Economist
Office of Fair Trading
Fleetbank House
2-6 Salisbury Square
London EC4Y 8JX

amelia.fletcher@oft.gsi.gov.uk

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Authors of the report

Adrian Majumdar

Simon Bishop

Derek Ridyard

Iestyn Williams

Ugur Akgun

RBB Economics
The Connection
198 High Holborn
London WC1V 7BD

Telephone: +44 20 7421 2410
Fax: +44 20 7421 2411
Email: london@rbbecon.com

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1 EXECUTIVE SUMMARY

- 1.1 This report assesses the competitive effects of selective price cutting and loyalty rebates when employed by dominant firms. On the basis of that assessment, a framework is presented to determine the circumstances in which such practices are likely to give rise to adverse competitive outcomes to the detriment of consumers.

Overview

- 1.2 The Office of Fair Trading (OFT) commissioned RBB Economics to examine the economic analysis of selective price cutting and loyalty rebates by firms with substantial market power. This report outlines how we consider these types of conduct should be assessed.
- 1.3 Economic theory supports an effects-based approach to identifying anti-competitive behaviour. We consider that such an approach would improve clarity for business and competition practitioners by establishing:
- sound economic principles
 - a consistent framework for the analysis of foreclosure effects, and
 - safe harbours that make economic sense.
- 1.4 In contrast, a form-based approach is not well suited to the analysis of anti-competitive effects. This is because identical forms of behaviour can have very different effects depending on the case specific facts (eg: the degree of entry barriers, the market shares and nature of differentiation of existing competitors and the countervailing strength of buyers).
- 1.5 Chapter 2 sets out the key economic principles. We define an exclusionary abuse to be a practice that, through marginalising existing or potential competitors, harms the process of competition and thereby harms consumers.

- 1.6 When distinguishing an exclusionary abuse from normal price competition, the following high level principles are important.
- 1.7 First, low prices and pricing freedom should generally be encouraged. The pervasive use of price cuts and non-cost-related discounts by firms without market power demonstrates that there are many non-exclusionary motives for using discount schemes. The same motives apply for dominant firms as well. Economic theory does not suggest that dominant firms usually use selective price cuts and discounts that give rise to anti-competitive outcomes.
- 1.8 Second, the competition concern raised by selective price cuts and fidelity rebates is usually foreclosure. The analysis of foreclosure is the main competition issue and is, therefore, the principal focus of our report. The appropriate definition of foreclosure must distinguish between behaviour that leads to a rival's lower market share (or exit) without harming competition versus harmful exclusionary outcomes that are ultimately bad for consumers. We define foreclosure as a practice by a firm with market power that harms consumers in the long run (a) by marginalising and weakening existing competition in markets where entry barriers exist; and/or (b) by raising entry barriers to markets where existing competition is not effective.
- 1.9 Third, a consistent framework for analysing foreclosure is required. Much of our report is concerned with providing a way to distinguish between pro-competitive and anti-competitive behaviour. By maintaining the focus on harmful exclusionary effects, we offer a consistent framework for analysis which applies both for the analysis of selective price cuts and (appropriately modified) for the analysis of fidelity rebates.
- 1.10 Fourth, precedents can affect the incentives of firms to behave pro-competitively. We note how the incentives to set low prices may be affected by the stance taken by the competition authorities as regards when to intervene and how much evidence is required to demonstrate anti-competitive behaviour. An overly 'interventionist' stance would chill price competition.

- 1.11 We describe arguments for and against intervening where the effects of alleged anti-competitive behaviour on competition and consumers is hard to determine. An 'interventionist approach' is based on the view that the competitive conduct of dominant firms should be constrained in order to assist entrants or competitors even if the conduct in question makes good business sense in its own right (ie: would be pursued even absent a harmful impact on competition). This approach embodies the view that some price competition, even if from less efficient firms, is better than none at all.
- 1.12 However, there are persuasive counter-arguments to the 'interventionist approach'. First, economic theories of exclusion typically focus on near monopolists and even here there is no consensus that dominant firms usually use discount schemes to harm competition – a case by case approach is required. For firms with market power (but who are not near monopolists) profitable exclusion is even harder to achieve. Further, there is pervasive use of discounts and price cuts for pro-competitive reasons by firms without market power and these same motives apply for dominant firms. Taken together, these factors strongly suggest that the circumstances in which profitable discount schemes are beneficial are likely to exceed those in which they are harmful, even for dominant firms. In such circumstances, consumers would be harmed by intervention.
- 1.13 Second, decisions that embody interventionist principles create inappropriate precedent effects that would constrain the beneficial behaviour of other firms who fear that they could be found to be dominant. As a result, an interventionist regime is also likely to dull the incentive for firms to strive to become the market leader.
- 1.14 These objections indicate that an abusive practice should not simply be 'capable' of harming competition but, rather, it should be sufficiently 'likely' to have the effect of harming competition and consumers on the basis of the available evidence.

- 1.15 On the basis of the above, we conclude that in special circumstances in which the authorities consider there are good case-specific reasons for an interventionist approach but also fear that interventionist precedent might then apply more widely, the spread of such precedent should be limited. A possible way to do this would be to make clear that the precedent is 'ring fenced' to apply only to that specific case.

Efficiencies

- 1.16 Since economic theory does not indicate that dominant firms usually use discounts and price cuts that result in anti-competitive outcomes, we do not support placing the burden upon dominant firms to justify their price cuts or discounts, even when those discounts are non-cost-related, or conditional on the share of a buyer's needs. Such a presumption would cast the net too widely, catching many benign practices and generating an administratively costly process of throwing the beneficial practices back to sea. As a result, it would also risk chilling effective competition by discouraging firms from engaging in a wide range of pro-competitive pricing practices.
- 1.17 Moreover, it is inappropriate to assume that the absence of an efficiency justification implies the presence of harmful, exclusionary behaviour. There is no effective substitute for the authority demonstrating that the behaviour under consideration is likely to harm competition and consumers.
- 1.18 It is nevertheless helpful to ask: could the claimed commercial justification be met by a strategy that is less restrictive of competition? However, that strategy must be: plausible and not just a mere possibility; one that the dominant firm would reasonably have been expected to consider; and one that is as cost-effective as the strategy in question in terms of generating the claimed commercial justification.
- 1.19 Failing this version of the indispensability test means that less weight can be placed on the claimed commercial justification (although this would not be a sign of abusive behaviour in its own right).

- 1.20 Finally, while in theory 'efficiency benefits' can be traded against 'harmful effects', in practice an efficiency analysis is better suited to establishing objective commercial motivations.

Recoupment

- 1.21 The theories of exclusionary effect that underpin intervention against dominant firm pricing behaviour should, in our view, satisfy a 'recoupment' cross-check. This means that there should be a compelling explanation for why (quality adjusted) prices will go up or will remain higher than they otherwise would have done (in the long term and/or in other markets) as a result of the exclusionary behaviour. If recoupment is not possible, then the condition of long term harm to competition and consumers is not satisfied, so the case for intervention is not met.
- 1.22 This recoupment condition may seem harsh to competing firms who are forced to exit, or prevented from entering, as a result of the dominant firm's practices. However, it is justified by the need to keep intervention focused on behaviour that (likely) results in genuine long term harm to competition and consumers.

Selective price cuts

- 1.23 In Chapter 3 we analyse selective price cuts and suggest a framework for how to determine the circumstances in which such practices are likely to give rise to adverse competition outcomes. Selective price cuts occur where a supplier selects a group of customers and charges different prices to that group compared to another group, even though both groups purchase the same product. Usually the concern is that lower prices have been targeted at a group of customers to induce them not to switch to a potential new entrant, whilst other customers who are less likely to switch continue to pay the undiscounted prices. We focus on this scenario in our report.

- 1.24 First, we set out some stylized examples of when selective price cuts may occur in response to the threat of entry; how a new entrant may be excluded; and whether this represents a competition concern or not. Our examples demonstrate how the existence of sunk entry costs, economies of scale in production, and network effects can create the conditions under which pricing behaviour can lead to the exit of a new entrant. We also note that exit is less likely when the entrant produces a differentiated good and that the theories of exclusion are best developed for firms that are near monopolists.
- 1.25 There is no support in economic theory for a presumption that when an incumbent responds to the threat of new entry by selectively lowering prices that this will necessarily harm competition and consumers. Further, models that show how exit might occur rarely offer practical guidance on when intervention to protect rivals is appropriate or on what the remedies should be. However, the economic principles from these models can be used to establish a framework in which selective pricing cases can be addressed. This is the focus of the rest of Chapter 3 and these principles recur in Chapter 4.

Initial screens

- 1.26 As the starting point for our framework for analysing foreclosure, we consider initial screens that can be applied at an early stage to identify those cases where the threat of exclusionary effects can be eliminated and the enquiry closed down. (Similar screens are applied to the analysis of fidelity rebates).
- 1.27 First, there must be an independent assessment of dominance to establish the degree of market power held by the firm in question. (This assessment is related to the test for recouping losses, as a firm without market power would not be in a position to sustain supra competitive prices, but does not avoid the need for the 'recoupment' cross-check at a later stage).

- 1.28 Second, there should be a consideration of alternative routes to market on a scale sufficient to become a viable competitor. An important point to emphasise is that the concept of foreclosure relates to the market and not to any particular customer. Even if the selective price reductions of a dominant firm are targeted at certain buyers in a way that induces them not to buy from a rival supplier, it is still important to consider whether the entrant could make headway by selling to other buyers or (in intermediate markets) by establishing its own downstream operations and/or by missing out the downstream level completely and selling directly to final consumers.
- 1.29 Third, it is important (although clearly not sufficient) to demonstrate that the entrant will suffer as a result of the pricing policy. Thus, if the selective price cut in question is very limited or the reduction in price so small that it is unlikely to have a marked effect on buyers' incentives to deal with the entrant, the case can be dismissed at an early stage (even if the buyer's demand does represent a significant part of the opportunities open to the entrant).
- 1.30 All these initial screens are equally important. Thus, even if the conduct in question would have a marked incentive on certain buyers, it would not raise a competition concern if there were sufficient alternative routes to market.

Distinguishing between harm to a competitor and harm to competition

- 1.31 Where an investigation has proceeded beyond the initial screening stage, it is necessary to address the (often difficult) question of whether there is harm to competition and consumers or whether only a competitor is harmed.
- 1.32 There are several possible tests: price/cost tests; profit sacrifice tests; tests to identify behaviour that makes no sense but for exclusion; and tests to identify whether an equally efficient competitor would be excluded.

- 1.33 Price/costs tests are form-based tests and so are not sufficient for identifying anti competitive effects. Their attraction lies in identifying occasions when it is reasonable to ask why a firm priced below a certain measure of cost, and to identify safe harbours.
- 1.34 Economic theory tends to support the uses of 'avoidable' and 'incremental' cost measures. Both depend upon the time period in question - the longer the period, the more the costs that become avoidable or incremental. (These terms are defined more precisely in Chapter 3 and explained with several examples).
- 1.35 The relevant 'price' and 'cost' depends on the question we seek to address. For example, price/cost tests can be structured to address sacrifice tests, 'but for' tests and equally efficient competitor tests.
- 1.36 Profit sacrifice theories are often portrayed as looking for evidence that a firm has departed from a short run profit maximising strategy in order to invest in future profits gained by anti-competitive means. However, the test suffers from informational problems (how to identify more profitable strategies that could have been pursued and account for genuine business mistakes). Moreover, there are many pro-competitive reasons for incurring short run sacrifice – investing in plant, machinery, marketing and R&D for example. Evidence of sacrifice by itself tells us little unless accompanied by a fact based theory of harm to competition and consumers.
- 1.37 The 'no economic sense but for exclusion' test has the following prongs: (a) identify the potential harm to competition and (b) identify whether the conduct giving rise to that harm is more profitable than alternative plausible strategies only due to the harm caused. While this test may be effective for some types of anti-competitive behaviour, it is not designed for the analysis of predation, selective price cuts and fidelity rebates. In particular, in testing whether it is only the anti-competitive effect that makes the chosen strategy more profitable than other strategies this means that the test is similar to a 'sacrifice test' but with a longer term horizon. Therefore, the test suffers from the same informational

problems. Moreover, there may be considerable practical difficulties in measuring the profitability of alternative long term strategies, particularly if one attempts to distinguish between legitimate profit from the strategy and those gains that must be stripped out because they arise only due to harming competition.

- 1.38 The equally efficient competitor test seeks to put into application the idea that if competition promotes the survival of the most efficient firms, taking action against a dominant firm's alleged exclusionary behaviour would be justified only where it is clear that such behaviour is likely to harm rivals that are equally or more efficient firms than the dominant firm.
- 1.39 The concept of the equally efficient competitor test helps to justify the use of a suitable avoidable cost standard as a way to dismiss allegations of predation where firms are already existing competitors. However, failing the test (ie: pricing below avoidable cost) is not sufficient to show that harm to competition has occurred. There are legitimate reasons for pricing below avoidable cost (for example during the early stages of 'dynamic' markets where learning by doing and network economies are important or where a market contains too many firms as might occur following an adverse demand or cost shock).
- 1.40 A contentious issue with the application of the equally efficient competitor test to selective price cuts is that a potential entrant has not yet incurred any sunk costs that are required to enter the market. Thus, even if the entrant would be as efficient as the rival if it enters, the incumbent might be able profitably to exclude the entrant by pricing above its own avoidable cost but below that of its rival.
- 1.41 This has been dubbed 'above cost predation'. It begs the questions of whether the incumbent's advantage should be treated as a legitimate cost advantage (and thus the entrant is simply not equally efficient) and whether competition can be improved through seeking to 'manage' the entry of less efficient rivals.

- 1.42 In theory, we can devise models which show how intervening to protect a less efficient entrant can be either good or bad for consumers. While intervention may be good for consumers if the counterfactual is no entry at all, consumers may suffer if a rule against above cost exclusion means that the entrant finds it more profitable to enter at a 'high' cost rather than invest further and enter with a lower cost (or better) product. This highlights the problem: intervening against 'above cost predation' could discourage innovation and protect inefficient production.
- 1.43 There are also practical problems. How do we measure the incumbent's cost advantage and thereby 'handicap' the incumbent appropriately? If the incumbent had to price at the entrant's cost level, it would probably not know these costs and hence what was a lawful price and what was not. It would be inappropriate to punish the dominant firm for pricing below a level that it could not observe. Further, a rival could 'game' the system by inflating its own costs, making it more likely that the dominant firm is punished and regulated (eg: by the imposition of a price floor). Complaining could become more profitable than competing.
- 1.44 Further, finding and monitoring the appropriate remedy is also difficult. For example, if the dominant firm is not permitted to lower price for a certain amount of time, can it increase quality instead? If the authorities prevent firms from making quality improvements, would this harm innovation?
- 1.45 In short, intervention against above cost predation would generate the real risk that a precedent is established which creates an unintended chilling effect on price competition in other markets. Even where there is a good case for intervention in a specific case, there is still the possibility that this creates precedent that affects other markets, although this could be dampened where the intervention is widely understood to be case specific (eg: where the authorities make statements to 'ring-fence' precedent or, in some regulated industries, where interventions are understood to be at most sector specific).

Conclusions on above cost predation

- 1.46 We consider that pricing above the appropriate measure of avoidable cost (ie: a measure chosen to apply an equally efficient competitor test over the relevant time period) should be presumed not to have an anti competitive effect.
- 1.47 The safe harbour test would be 'combinatorial'. The price discrimination strategy as a whole must generate revenues that exceed avoidable cost. In addition, price must exceed the avoidable cost of serving those customers who were targeted with 'selective' low prices.
- 1.48 Since all costs are avoidable to some degree in the long run, pricing above long run avoidable cost should be presumed not to have anti competitive effects. Pricing above short run avoidable cost should also be presumed not to have anti competitive effects, when it is clear that the relevant time period is the short run (eg: because the alleged exclusionary behaviour lasted only for a short period of time).
- 1.49 Where genuine uncertainty exists as regards the time period (eg: as may be the case in high fixed cost and low variable cost industries), prices may fall in the 'grey area' above short run, but below long run, avoidable cost. In this case, strong weight should be placed on non-exclusionary business motivations where these are substantiated by the dominant firm.
- 1.50 Finally, where prices are below the relevant measure of cost, this gives rise to justifiable suspicion in the sense that there is a reason to investigate further. Nevertheless, this is not sufficient to determine an anti-competitive effect. A fact based story of harm to competition (including an analysis of recouping losses) is still required.
- 1.51 We acknowledge that theoretical models can be devised to show how this safe harbour might, in some circumstances, sanction harmful behaviour. However, we consider that, overall, the safe harbour would perform well in preventing adverse precedent which would chill price competition and harm innovation.

Economic principles and evidence

1.52 The final part of Chapter 3 completes the proposed framework for the analysis of the competitive effects of selective price cuts. It explains why a finding of abuse must be supported by a fact based story of harm to competition and recommends economic principles to be applied and evidence to be evaluated when making that assessment. These include:

- whether there is a coherent theory of harm to competition and consumers supported by the facts of the case. The coherent story of harm to competition and consumers is essential (the initial screens, for example, seek to determine whether a case can be dismissed early because harm to competition is unlikely). Without it, there is no likelihood of anti competitive effects. We highlight the key questions and assumptions to test against the evidence
- evidence of harm to a competitor. Although clearly insufficient to demonstrate anti-competitive effects, this would often be a pre-requisite. Such evidence would be considered as part of the initial screens described above and through proposed safe-harbour tests. In addition, the authorities should consider the scope for the rival to make headway in the market by differentiating itself. Actual evidence of harm is also important. For example, did the behaviour in question cause a decline in the rival's market share and profitability?
- non exclusionary motivations. Where (but only where) there is justifiable suspicion of the dominant firm's behaviour, the burden should be on the dominant firm to provide a benign commercial justification for its behaviour. Pricing below avoidable cost (appropriately measured) gives rise to justifiable suspicion when the initial screens indicate that foreclosure is feasible. However, this does not mean that a dominant firm's inability to provide a justification means that it must have behaved anti-competitively – there would still need to be a coherent and fact based story of harm to competition. Where the dominant firm can provide and substantiate a business justification for its selective price cutting

behaviour, this evidence should weigh heavily against finding an abuse – low pricing practices are generally to be encouraged

- evidence of the effect on consumers. Ultimately an anti-competitive practice will harm consumers through harming the process of competition. Therefore any direct evidence that consumers are harmed (or not) is important and often critical. For example, where buyers use the threat of sponsoring new entry to negotiate lower prices this suggests that the selective prices are not exclusionary in that, for the threat to switch to be real, the prospect of entry must remain
- recouping losses. An assessment of how losses would be recouped forms part of the fact based story of harm to competition. Recouping losses should always be considered. By this we mean that there should be a compelling explanation for why (quality adjusted) prices will go up or will remain higher than they otherwise would have done (in the long term and/or in other markets). After all, this is how consumers are harmed, and
- assessment of the case for intervention. This would include establishing the weight of evidence in favour of harm to competition and consumers; an analysis of whether remedies are workable; and, importantly, a consideration of how intervention may affect future precedent. (Where there is a risk that intervention would have an unintended adverse impact in other markets, statements to 'ring-fence' precedent may help to limit this effect).

Fidelity rebates

- 1.53 In Chapter 4, we analyse fidelity rebates and suggest a framework for their treatment under competition law. (We use the terms fidelity rebate and loyalty discount interchangeably.) The concern with fidelity rebates is usually that a supplier with substantial market power makes a low price conditional on exclusive (or near exclusive) purchasing, with the effect that a market is foreclosed to a rival competitor.

- 1.54 The legal definition of a 'fidelity rebate' is arguably any discount that has the capability of inducing loyalty. However, 'loyalty inducing' is too wide and uncertain a definition to be helpful. The essence of price competition is that by lowering its price a supplier induces a customer to buy more of the brand in question, often at the expense of a rival's sales. So, a discount that is quintessentially competitive could be defined a fidelity rebate because it induces the buyer to buy more from one supplier and less from another.
- 1.55 Therefore, in order to make the definition useful and operational, we define a fidelity rebate to be one that either explicitly or implicitly makes discounts conditional on the share of a buyer's needs taken from a supplier. Thus discounts are relative to the share of the buyer's needs and so, unlike standard quantity discounts, are not based on absolute amounts purchased. We provide examples of such schemes. However, even on this narrow definition a fidelity rebate covers many types of discount structure. We would not expect these forms of discounting usually to be harmful.
- 1.56 Economic theory provides several plausible pro-competitive motivations for fidelity rebates:
- providing an appropriate reward for the efforts of downstream firms to promote the dominant supplier's products
 - lowering marginal input costs for downstream buyers (irrespective of their size) and thereby encouraging them to compete more effectively on price in downstream markets
 - reflecting cost based efficiencies or providing an appropriate environment for investment, and
 - maximisation of customer bargaining power (eg: where buyers demand a discount for offering a supplier exclusive rights of access to the buyer or its customers).

- 1.57 Discounts based on a share of the buyer's needs are more likely to be found where demand is not stable or predictable and/or subject to retailer specific shocks or agency problems. In these cases, rather than setting a discount based on an absolute target, a relative target may better achieve the pro-competitive effects.
- 1.58 We then explain a theoretical link between the analysis of selective price cuts and a stylized case of fidelity rebates. We describe how a fidelity rebate can, in principle, be used to target a below cost price on that part of a buyer's needs where the buyer has a choice of suppliers, while leaving prices higher on other units where the dominant firm has 'assured' sales at supra-competitive prices. This is analogous to a dominant firm selectively lowering prices below cost in a market where it faces entry but leaving prices higher where it faces no competition. This stylised link turns out to be helpful when considering the development of safe harbours.
- 1.59 Much of the analysis of the foreclosure effects of fidelity rebate schemes carries over (appropriately modified) from the analysis of the foreclosure effect of selective discounts. The first two initial screens are the same (ie: establish the dominant firm's market power and then consider whether its rival has sufficient scope to remain a viable competitor through alternative routes to market).
- 1.60 When addressing the third initial screen (demonstration that the entrant would be likely to suffer as a result of the pricing policy) it is helpful to consider the incentive effects of the rebate scheme. These are stronger the greater the reward on achieving the target and the lower the costs of reaching the target. Incentives are affected by the extent and nature of the buyers' discretion in meeting the qualifying criteria for the discount.
- 1.61 This is explained as follows (we focus mainly on intermediate markets, ie: the stage at which fidelity rebates typically cause concern). First, if there is natural demand growth for the product, it may be possible to meet the target without an impact on a rival. Second, if meeting the target requires greater promotional effort on behalf of the customer, the

impact on rivals may depend on whether that promotion implies lesser effort expended in assisting rivals' sales. Third, if there is direct substitution between the products of the rival and the dominant firm, the risk that rivals will suffer from the attainment of the target is accentuated.

Determining whether price is above cost

- 1.62 As with selective price cuts, we favour a safe-harbour where prices are above the appropriate measure of avoidable cost (ie: a measure chosen to apply an equally efficient competitor test over the relevant time period). Determining whether price is above cost requires two main questions to be addressed. First, is the whole scheme itself profitable? To assess this question, the appropriate test is to consider whether revenues from the scheme as a whole exceed its avoidable costs over the relevant period. Second, when the details of the scheme are analysed, are below cost discounts targeted on a range of potential supply that is open to competition?
- 1.63 This second question is difficult to address precisely, unless there are good data on costs and buyer preferences (which in most cases is unlikely). Nevertheless, we can devise a safe harbour test by identifying an exaggerated assured base of sales (demand for which is assumed to exist at the list price) that is likely to exceed the true assured base and by assuming that the appropriate measure of cost is not sensitive to the choice of the assured base (eg: because there are no capacity constraints and a constant marginal cost of production).
- 1.64 With these assumptions, we can allocate the whole of a discount on the product to the non-captive part of the market. If we are confident that we have over-allocated a discount and the implied price still exceeds the appropriate measure of cost, this suggests that the discount scheme is not exclusionary. We provide several examples both hypothetical and from previous cases.

Multi product rebates

- 1.65 We also consider multi product rebates. In such cases, it is important to consider the extent to which the dominant firm faces competition on other product lines. First, where the dominant firm faces competition on many other product lines, buyers may often have the option of not purchasing from the dominant firm at all and instead compiling their own bundle by purchasing each component individually. This gives the dominant firm less scope profitably to exclude rivals.
- 1.66 Second, if a rival can replicate the dominant firm's bundle (including through alliances with other firms), the rival and the dominant firm can, in principle compete head on. However, to replicate the entire bundle would require that there are no entry barriers to producing the other components.
- 1.67 Where a rival does not have these options to a sufficient degree, a below cost discount may harm competition. Allocating bundled discounts correctly is particularly difficult. However, the safe harbour approach described above remains valid. If the entire bundle discount is allocated to a single product and the implied price still exceeds the relevant measure of avoidable cost, the discount scheme should be presumed not to have anti competitive effects.
- 1.68 Where the safe harbour test is not met, this is not sufficient evidence that there are anti competitive effects. In our view, an analysis of abuse should always provide a story of harm to competition – ie: a mechanism by which consumers end up being worse off – and to show that the facts of the case support this view.

A framework for analysis

- 1.69 We then summarise the points made in the Chapter in a four page check list of issues to address and potentially useful evidence to consider.

1.70 The checklist is then tested in four cases – a hypothetical scenario (at the end note to Chapter 4) as well as Virgin/BA, LePage's and Canada Pipe (see Annexes B, C and D).

Economic principles versus Michelin II precedent on the legality of rebates

1.71 In our final chapter, we discuss the CFI's judgement in Michelin II highlighting important precedent established (or re-confirmed) by the CFI and then discussing the extent to which this is underpinned by economic principles.

1.72 First we highlight some main points from the judgment, including the CFI's view on criteria for legal rebate schemes. Second we discuss the how well the CFI's criteria for a legal rebate scheme fit with economic principles. We consider: the duration of the reference period; rollback versus incremental rebates; linking discounts to efficiencies; and the relevance of the concepts of uncertainty and fairness.

1.73 As regards duration, there is no simple relationship between the length of the reference period and the likelihood of anti-competitive behaviour. The reference period should be assessed in conjunction with the nature of stochastic (ie: volatile) demand. We highlight other issues to consider which specifically relate to the reference period. These include: whether buyers have incentives to agree to 'lock themselves in' to long reference periods if that would harm competition among their suppliers (such incentives may exist but only under certain circumstances); whether contracts are staggered such that it would take a long time for a rival to win sufficient contracts to operate at an efficient scale; and the contract length agreed in similar industries between buyers and suppliers without market power (this may indicate whether a long reference period is an outcome of effective competition as opposed to a feature that may distort competition).

- 1.74 Ultimately, however, the potential foreclosure effect of a discount scheme should be assessed in the round, ie: according to the framework suggested in the previous chapters.
- 1.75 We then consider incremental rebates and rollback rebates. An incremental rebate means that on reaching a target a discount applies on those purchases beyond the target. A rollback rebate is where, having reached a target, a discount applies on all units, not just the additional ones purchased above the target.
- 1.76 In Michelin II, the CFI indicated that 'loyalty inducing' rollback discounts were per se abusive. This negative presumption appears to be derived from a view that implied 'negative prices' arising from the 'saw tooth' effect of rollback rebates must be harmful. We show that this presumption is not justified on economic grounds.
- 1.77 Implied negative prices are a feature of providing stronger incentives to purchase at the target but are not necessarily a sign of profit sacrifice or exclusionary behaviour. We discuss several reasons why a dominant firm may use rollback rebates to provide buyers with incentives to buy more of its goods without having an exclusionary motive. These include: lowering prices for large buyers; flexibility to offer highly non linear schemes; inducing buyers to report the true state of demand.
- 1.78 When used for beneficial reasons a rollback rebate may be better for consumers than an incremental rebate – because it can provide more powerful incentives. On the other hand, when used for ill, rollback rebates may well be more harmful than an incremental rebate. Thus, it cannot be presumed that rollback rebates are necessarily harmful when employed by dominant firms.
- 1.79 We then turn to the relevance of seeking to link cost savings directly to discounts. We argue that this is neither practical nor desirable. We also note the importance of discounts to generate demand side incentives. A consideration of efficiencies should not be limited only to the issue of whether production costs are lower.

1.80 Finally we note that the key issue is whether a practice harms competition and consumers. 'Unfairness' and 'uncertainty' are not helpful principles for determining abuse.

Annexes

1.81 Our first annexe examines the EC Commission's use of cost tests to analyse predatory pricing in Deutsche Post AG. The case demonstrates the importance of the relevant time period and an example of measuring avoidable (or incremental) costs when taking certain assets as given (ie: those required by Deutsche Post to carry out its universal service obligation).

1.82 The EC Commission considered that the relevant time period was the six year period over which Deutsche Post's pricing behaviour had been in place. Within that time period all incremental costs associated with providing mail order parcel services were avoidable. The Commission took as given common costs, ie: those assets required to provide Deutsche Post's universal service obligation and considered only those additional costs of providing the mail order parcel service. All directly attributable costs of this activity were deemed avoidable since over a six year period Deutsche Post would have had scope to recognise that its service was not incrementally profitable and either raise prices or dispose of the relevant assets.

1.83 Our second annexe applies our framework for analysing foreclosure in fidelity rebates cases to the Virgin/BA case. We conclude that the EC Commission and the CFI did not require evidence of harm to competition and consumers in marked contrast to the US Court which presided over a very similar case but did not intervene. We understand this difference to be due to a greater emphasis in the US on demonstrating anti-competitive effects with the appropriate evidence and a greater concern about the cost of 'false positives', ie: over intervention that deters beneficial pricing behaviour.

- 1.84 Our third annexe applies our framework for analysing foreclosure to the LePage's case in the US. We conclude that 3M would appear to have had the ability to exclude LePage's due to its superior efficiency as well as its market power in sales of Scotch Tape. Indeed, 3M may well have sought to exclude LePage's, however whether this was in order to protect its market power in Scotch Tape or a legitimate response to the growth in private label sales is a harder question. The non differentiated (ie: 'homogenous') nature of private label tape indicates that 'normal' price competition would likely be very intense.
- 1.85 The power of buyers in the market would appear a key issue. The main buyers were sophisticated and had the incentive and quite possibly the ability to protect themselves from further price rises. These buyers could, in theory, have acted to raise costs for weaker buyers although this theory did not have strong evidential support. If competition among the powerful buyers in the downstream markets was effective, it would seem that final consumers (those to whom the retailers sell) would not ultimately be harmed by the exclusion of LePage's. In any case, arguably LePage's was not excluded to a substantial degree – it still retained two thirds of the private label market.
- 1.86 An interesting test would have been to assess whether even if all of the discount were allocated to tape (which would probably be an over allocation), 3M was pricing above an appropriate measure of cost.
- 1.87 Our fourth annexe summarises a recent case, Canada Pipe. We apply our framework to the case. We note that the Canadian Tribunal acknowledged the existence of barriers to growth which protected the incumbent (Bibby) from new entrants and existing competitors but found that the discount scheme was not a cause or extension of the barriers to growth. We note that a more interventionist authority could have taken the view that the incumbent's high market share and reputational advantage combined with barriers to growth meant that any further behaviour that made life harder for its rivals was necessarily bad.

- 1.88 Instead, the Canadian Tribunal took a less interventionist view – despite the incumbent's market power and the fact that the discount scheme harmed rivals, buyers ultimately gained. Further, the Tribunal did not seek to intervene to overturn the incumbent's market power. This suggests that the Tribunal was unwilling to 'manage' competition.
- 1.89 Our final annexe reviews the literature on how Ramsey pricing principles may be employed to set different prices in different markets to maximise total welfare. We include this annexe for completeness as the OFT asked us to consider total welfare as well as consumer welfare standards. Ramsey pricing principles have been developed primarily for regulated industries, with a view to the optimal recovery of fixed costs. In our view there are relatively few bright lines that carry over into unregulated industries that would provide a robust basis in selective price cutting and fidelity rebate cases for additional interventions which seek to fine tune total welfare (ie: intervention in addition to those discussed in the main report where likely harm to competition and consumers has been demonstrated).

2 INTRODUCTION

- 2.1 This report provides an economic analysis of the competitive effects of selective price cutting and loyalty rebates when employed by dominant firms. On the basis of that competitive assessment, we present a framework to determine under what circumstances such practices give rise to adverse competitive outcomes.
- 2.2 In this introduction, we identify the core economic themes that run through the competitive analysis of these pricing practices and discuss their high level implications for policy.
- 2.3 First, we set out why an effects-based analysis of the likelihood of anti competitive effects is preferable to a form-based analysis and then discuss the implications of our proposed effects-based approach.
- 2.4 Second, we set out core themes. We provide an economic definition of anti competitive effects. We then discuss high level principles. We argue that low prices and pricing freedom for dominant firms should generally be encouraged. We then provide an economic definition of foreclosure and explain the merits of using a fact based story of harm to competition when assessing foreclosure. We also discuss how precedent can impact adversely on the incentives of firms to carry out pro-competitive behaviour and note ways that the authorities might reduce this risk.
- 2.5 Finally, we describe the layout of the rest of this report.

The advantages of an effects-based analysis of anti-competitive behaviour

- 2.6 Competition policy should be guided by relevant economic principles that have robust application. As Vickers (2004) notes: 'Case law does suggest standards to distinguish between exclusionary and pro-competitive behaviour for some types of dominant firm conduct, but the underlying substantive principles are not always easy to discern. Development of such principles is important, for otherwise there would

be a danger that competition law towards abuse of dominance could become a set of ad hoc and unpredictable rules that are consistent neither with each other nor with the policy goals of the law'.

- 2.7 Vickers concludes that: 'In the competition between economics- and form-based approaches the former has strong advantages. It can align the law with its economic purpose and in an internally consistent manner. It can prevent form from triumphing over substance at the cost of both allowing detrimental conduct and blocking benign conduct. And it can provide clarity at a fundamental, rather than superficial, level. These advantages will be realised if European competition law on abuse of dominance becomes more firmly anchored to economic principles, and where those principles are practically applicable by competition authorities, lawyers and the courts'.
- 2.8 This section discusses why, in general, our preferred effects-based approach to establishing anti competitive behaviour is preferable to less flexible, form-based rules.

Form-based rules

- 2.9 In this and the following section, we consider the merits of a form-based approach versus our effects-based approach in identifying, penalising and deterring abusive behaviour.
- 2.10 A good form-based rule is one that generally prevents harmful behaviour while at the same time rarely preventing beneficial behaviour. For example, consider the law against price fixing cartels. It is generally accepted that although not all price fixing cartels harm consumers, most of them do. Moreover, where they do not, it is usually because they are ineffective at raising prices so that consumers are not worse off as opposed to being better off. Therefore, under a per se rule that prohibited horizontal price-fixing arrangements there are very few cases where beneficial behaviour is punished or where anti-competitive behaviour is permitted.

- 2.11 However, form-based rules do not perform well where there are no strong prior grounds to believe that they will deter far more 'bad' than 'good'. This is because, if the rule is applied consistently, it will tend to punish and therefore deter beneficial behaviour on a regular basis. Even if the authorities sought to carve out exceptions to the rule (eg: in order to reduce the incidence of punishing or deterring beneficial behaviour) this would lead to an inconsistent application of the rule which would lead to an ad hoc development of 'exceptions to the rule'.
- 2.12 This report demonstrates that form-based rules do not perform well in assessing the likely competitive effects of selective price cuts and fidelity rebates because they are unable consistently to discriminate between beneficial and anticompetitive behaviour. For example, consider the following candidate rules that are sometimes put forward for identifying abusive low pricing practices:
- price cuts that 'beat' the competition and are targeted on those buyers who have the scope to deal with a new entrant
 - discounts that are conditional on the buyer placing a specified share of its purchases with the seller, and
 - discount schemes that involve 'rollback' elements, where meeting a target allows the buyer to qualify for a discount on all sales.
- 2.13 This report explains that these rules could sometimes incorrectly proscribe pro-competitive behaviour. Moreover, we believe this is not a minor side effect but a major problem – there is no prior reason to believe that the above rules are more likely to identify harmful behaviour than pro-competitive behaviour.
- 2.14 Proponents of a form-based approach argue that the pursuit of a greater economics focus comes at the expense of clarity for businesses and competition policy practitioners. However, this is not a sound basis for adhering to a form-based approach when accepted economic principles demonstrate that it involves too many (or too few) interventions. In

addition, when per se rules get modified and qualified so as to remove inherent distortions their clarity is reduced.

2.15 Furthermore, effects-based approaches do not necessarily come at the expense of clarity for businesses and competition policy practitioners. On the contrary, there is considerable scope for guidance that increases both certainty and economic focus through establishing:

- sound economic principles
- a consistent framework for the analysis of foreclosure effects, and
- safe harbours where they make economic sense.

2.16 In this regard we note that, in certain circumstances, form-based rules can be useful as a filter to identify whether cases should be dismissed at an early stage and cases worthy of further investigation. For example, we argue that pricing above avoidable cost (appropriately measured) should be presumed not to have an anti competitive effect. This is not to argue that pricing below avoidable cost will have an anti-competitive effect. Rather, it is to recognise that such behaviour reveals the existence of a business practice (ie: strategic pricing behaviour) that cannot be summarily dismissed as benign and hence merits further investigation.

Implications for the framework for analysing anti-competitive conduct under an effects-based approach

2.17 In arguing for an effects-based approach, it is inevitable that we shall rarely be in a position to provide detailed prescriptive guidance as to what is anti-competitive behaviour since that would be to return to formalistic rules.

2.18 The main challenge that we seek to address in this report is therefore to provide a framework for analysing potentially anti competitive conduct, based on sound economic principles that have robust application. We identify these economic principles and use them to draw up a list of

questions that will usually need to be addressed in an economic analysis of selective price cuts and fidelity rebates.

- 2.19 We identify initial screens that allow cases to be dismissed at an early stage because harmful exclusionary effects are unlikely. For those cases that are not dismissed at the initial screen, we discuss principles and evidence for assessing the harder question of how to distinguish between harmful and beneficial behaviour. These principles draw in part on the literature on predatory pricing, appropriately modified.
- 2.20 Where possible, we identify safe harbour tests. Passing these tests allows for a presumption of no anti-competitive effects. Failing the test is not a finding of anti competitive effects, instead it indicates that further analysis is required.

Core economic themes

- 2.21 In this section, we describe the over-arching economics principles that are important in an effects-based analysis of the competitive effects of selective price cuts and of fidelity rebates. These themes recur throughout our report.

Economic definition of anti-competitive effects

- 2.22 First it is helpful to set out an economics based definition of an 'exclusionary' anti competitive effect. Such a practice would not only marginalise existing or potential competitors but it would also have the following consequences:¹
- (a) it would (be likely to) harm the process of competition, and
 - (b) ultimately consumers would (be likely to) suffer as a result.
- 2.23 We acknowledge that typically consumers suffer whenever the process of competition is damaged and so (a) implies (b).² However, we retain the distinction for the following reasons.
- 2.24 First, in some cases, competition appears to be restricted in a 'static' sense (ie: in a particular time period) but that restriction is necessary to
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¹ When found to be abusive, fidelity rebates and selective price cuts are examples of 'exclusionary' abuses. We do not discuss 'exploitative' abuses, such as excessive pricing, in this report. Where prices are truly excessive, this is a symptom of competition not working effectively, for example because the excessive prices have not led to new entry. Thus, our definition of abuse would be modified. The first bullet would not be to identify how the practice harms competition but to identify why competition is already so weak so as to make exploitative behaviour possible.

² While (a) may imply (b), (b) does not necessarily imply (a). For example, suppose the authorities consider that a competitive market under-supplies a certain good (eg: education) and that intervention is required to increase the provision of that good so that consumers as a whole gain. Such an intervention is not based on the failure of competition per se, rather it is based on the failure of competition to deliver a wider social objective. In our view, it would not be desirable to denote a practice that does not harm competition but nevertheless leads to a perceived reduction in consumer welfare (or total welfare) as anti-competitive. If that were the case, dominant firms would face an additional, unmanageable task of second guessing the social welfare objectives (as opposed to competition objectives) monitored by the authorities.

promote competition in a 'dynamic' sense (ie: in later time periods). For example, a patent may restrict price competition while it is in force. However, this restriction is desirable in order to provide the appropriate incentives for firms to innovate in the first place. Absent the patent, the innovator's product might be copied by others and the ensuing competition could drive down the innovator's profits so that it did not recover its initial investment costs. In turn, that would deter potential innovators from research and development.

- 2.25 Similarly, an exclusive purchasing agreement with a dominant supplier restricts a buyer's choice of supplier but in so doing may provide the dominant firm with appropriate incentives to invest. We can think of firms competing in more than one 'dimension' (eg: innovation, quality and price). Where there is a restriction of one particular dimension of competition that promotes competition in other dimensions, the relevant issue is which 'dimension' of competition is more important for consumers.
- 2.26 In short, anti-competitive exclusion harms (or is likely to harm) consumers through its (likely) harm to competition.

Low prices and pricing freedom should generally be encouraged

- 2.27 Competition is a process of rivalry whereby, through offering lower prices (or better quality or more innovative products), firms profit from winning sales from their rivals and from growing demand for their product.
- 2.28 In the generality of cases, the essential business justification for selective price cuts and rebates is simple – selling more products at prices which make a positive contribution to profit. A firm may be reluctant to offer a lower price on all sales simply because to do so

would reduce profits. However, where lower prices can be targeted on incremental units, this allows the supplier to sell more without harming revenues on other units sold.³ Usually this is entirely consistent with effective competition. Whether a firm was dominant or not, this same incentive would exist.

- 2.29 Similarly, the pervasive use of discounts by firms without market power demonstrates clearly that there are several non-exclusionary motives for employing discount schemes. These non-exclusionary motives also apply for dominant firms. Theory does not suggest that dominant firms would usually use discount schemes to harm competition. In turn, theory does not support a presumption that discounts employed by dominant firms should be presumed to have anti competitive effects unless they can be 'justified' with an efficiency rationale. Given this, a requirement that discounts must be 'justified' could chill price competition where firms are discouraged from employing beneficial discounts due to the burden of having to justify them to the authorities.

³ This argument does not apply so well in the case of rollback rebates. Efficiency considerations for rollback rebates are discussed in Chapter 5.

The concern is usually foreclosure

- 2.30 Although generally to be encouraged, in some circumstances low prices are capable of being anti competitive. Usually the harmful effect under consideration when considering selective price cutting or fidelity rebates employed by dominant firms will be foreclosure. This is the cause for concern considered in our report.⁴
- 2.31 The appropriate definition of anti-competitive foreclosure must distinguish between behaviour that leads to a reduction in a rival's market share (and perhaps even exit) but nevertheless benefits consumers in aggregate from harmful exclusionary outcomes that are ultimately bad for consumers. We define foreclosure as a practice by a firm with market power (or a group of firms that collectively have market power) that harms consumers in the long run by:
- marginalising and weakening existing competition where entry barriers exist, and/or
 - raising entry barriers to markets where existing competition is not effective.
- 2.32 When assessing the harmful effects of low pricing behaviour, it is not sufficient to demonstrate that a rival has (or would soon have) a smaller market share than it otherwise would have had or that a new entrant was excluded when it might otherwise have entered. Foreclosure cannot

⁴ Selective price cuts and fidelity rebates could in theory be used as part of a collusive strategy or to dampen competition. For example, a selective price cut may be a punishment for a firm that deviates from an agreed collusive price. Alternatively, in theory, fidelity rebates might be structured in a way that reduces the incentives of firms to compete 'head on' with each other. However, we see these concerns as subsidiary to the foreclosure concerns that we address throughout this report.

be a legitimate concern unless consumers are (likely to be) made worse off.⁵

2.33 Even where a pricing practice leads to a rival's exit, consumers need not suffer. Competition promotes growth for firms that are more efficient or offer better products, while punishing those inefficient firms that serve the needs of consumers less adeptly.

2.34 Admittedly, sometimes making the distinction between harmful and beneficial low pricing practices is difficult as there are sometimes plausible arguments for both outcomes. In these situations competing theories must be tested against the evidence with a specific view to distinguishing between legitimate and harmful behaviour. This is the focus of the next section.

Identify a fact based story of harm to competition

2.35 We advocate that in any investigation of an alleged anti competitive low pricing it is essential to set out a coherent theory of harm to competition and consumers arising from the practice in question. This is for the following reasons:

- without a coherent story of harm to competition, the practice should be presumed beneficial – after all, competition policy seeks to

⁵ It might be argued that where a firm is dominant existing competition is already weak and entry barriers already exist and thus any harm to a competitor equates to harm to competition. However, this argument is not persuasive. A dominant firm's practice of lowering prices, or making a better product, could make life harder for its rivals but still be to the benefit of consumers.

encourage low prices and the freedom of firms to choose their own pricing and commercial strategies⁶

- a coherent story of harm guards against assuming a price cut to be harmful just because there is no obvious efficiency explanation, ie: lacking an explanation that has been formally established in the economics or policy literature,⁷ and
- a coherent story of harm allows us to identify the key assumptions that must be tested against the evidence.

2.36 Moreover, any intervention against an abusive practice by a dominant firm must not only have a coherent story of how competition and ultimately consumers are (likely to be) harmed, but this story must be supported by the available facts of the particular case.

Overall approach

2.37 Our forthcoming chapters will establish that selective price cuts and fidelity rebates employed by dominant firms have the scope to benefit consumers as well as potentially to harm them. Therefore, there is no theoretical justification for taking a per se approach to the use of such practices by a dominant firm.

⁶ Where relevant, the question of the feasibility of recouping losses would be addressed as part of the fact based story of harm to competition.

⁷ As Vickers (2004) notes; '...there is a danger expressed by Ronald Coase (1972): 'If an economist finds something – a business practice of one sort or another – that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of un-understandable practices tends to be very large, and the reliance on monopoly explanation, frequent'. Although the economics of the past thirty years has reduced our ignorance, the warning is one still to heed. False inferences can be made not only about monopoly but also about anti-competitive conduct'.

- 2.38 The absence of theoretical 'bright lines' and the difficulties in obtaining relevant information mean that some uncertainty is inevitable in the assessment of anti competitive effects and that competition authorities may make mistakes. Authorities may punish benign behaviour that does not harm competition (a type I error) or allow through behaviour that is harmful (a type II error).
- 2.39 The balance of these errors is affected by the choice of the threshold that is chosen when defining anti-competitive activity in terms of the probability of harming competition and consumers. For example, if anti-competitive behaviour is 'capable' of harming competition and consumers this sets a relatively low threshold for intervention.⁸ This increases the risk of punishing and hence deterring beneficial behaviour.
- 2.40 On the other hand, if behaviour must be 'likely' to harm competition and consumers, firms are more encouraged to offer lower prices without the fear of being punished erroneously. This approach makes it harder to punish anti-competitive behaviour and so could lead to consumer detriment through encouraging dominant firms to pursue more anti-competitive practices than they otherwise would have done.
- 2.41 Proponents of the 'capable' threshold would argue that dominant firms are in a position where they have the ability and the incentive to harm competition. They would view the 'cost' of punishing dominant firms for beneficial behaviour as relatively low due to a belief that dominant firms rarely pursue benign behaviour.
- 2.42 Proponents of the 'likely' (or 'very likely') threshold would argue that this higher standard of proof is preferable for the following reasons.

⁸ In *Michelin II*, the CFI reaffirms the case law that abusive conduct does not have to be shown to restrict competition, just that it is capable of having that effect (paragraph 239).

- 2.43 First, in an interventionist regime, non dominant firms may be punished by mistake.⁹ As a result, price competition is chilled because many firms that could potentially be found dominant are discouraged from employing certain pricing practices that would otherwise have benefited consumers (fearing that this behaviour could be found abusive).
- 2.44 Second, economic theories of exclusion typically focus on near monopolists and even here there is no consensus that dominant firms usually use discount schemes to harm competition – a case by case approach is required. For firms with market power (but who are not near monopolists) profitable exclusion is even harder to achieve. Further, there is pervasive use of discounts and price cuts for pro-competitive reasons by firms without market power and these same motives apply for dominant firms. Taken together, these factors strongly suggest that the circumstances in which profitable discount schemes are beneficial are likely to exceed those in which they are harmful, even for dominant firms. Thus, there are many circumstances in which 'type I' errors could deter pro-competitive behaviour, while there are fewer circumstances in which 'type II' errors would encourage anti-competitive behaviour because of the more limited circumstances in which such behaviour is profitable. An interventionist approach generates a real risk, in the form of a detriment of consumers, of punishing firms for pro-competitive behaviour.¹⁰

⁹ Uncertainty is a real issue. For example, it is well known that market definition in potential abuse of dominance cases is sometimes very difficult due to the cellophane fallacy. See Baker and Bishop (2001).

¹⁰ Even if interventions on individual cases would seem likely to improve consumer welfare in the specific market concerned, there is a risk that such welfare benefits would be outweighed by unintended precedent effects in other markets. In this case the authorities, if they intervened, should make clear that the intervention is case specific.

- 2.45 Third, the exit of rivals is part of the 'selection' process of competition, where strong firms flourish through their better ability to meet the demands of consumers and the weak perish. In this vein, restricting the ability of dominant firms to defend their positions may temper the incentive for firms to win market share or innovate, as the rewards of becoming the market leader are reduced by the possibility of being found dominant.
- 2.46 Fourth, the more interventionist the regime, the greater the risk that competitors of a dominant firm find complaining more profitable than competing. Finally, some have argued that monopolies die out over time but judicial precedent may not – markets may be quicker to self-correct than courts.¹¹
- 2.47 Ultimately, the decision of whether an anti-competitive exclusion is defined at a threshold of being 'capable', 'likely' or 'very likely' of harming competition is a matter for the authorities. However, that choice must be made in full cognisance of the costs of false convictions as well as the costs of false acquittals. In the case of anti-competitive low prices, there is, in our view, a strong case for setting a high hurdle because low prices are generally to be encouraged, and the collateral damage to competition and consumer interests that arises from any clouding of this message is likely to be substantial.

¹¹ Easterbrook (1984) argues that punishing benign behaviour is a costlier error than permitting practices that harm competition. His central theme is that the welfare cost of the latter type of errors decrease over time because monopoly is self destructive. Harm to competition brings supra-normal profits for ill-doers and that makes entry look more attractive. Thus, the market itself has a chance of correcting the error made over time. Contrary to this, the market has no possibility of correcting judicial errors that condemn beneficial practices. Firms tend to avoid using such practices once they are condemned. Therefore the courts do not get a chance to change their decision on the practice.

Special responsibility

- 2.48 We also discuss the meaning and precedent effect of a dominant firm's 'special responsibility' to protect the competition that remains on the market.¹² If this means simply that dominant firms should be particularly careful not to behave in an anti-competitive manner given, by virtue of their substantial market power, they are capable of harmful conduct which non-dominant firms are not, then the special responsibility is no more than a reminder not to break the law. We advocate that a dominant firm's 'special responsibility' should mean no more than this.
- 2.49 We would not advocate a 'special responsibility' for dominant firms to give a helping hand to the remaining competition in the sense that they should refrain from harming competitors (although some commentators note the possibility that this is what the special responsibility could mean).¹³ Under this interpretation, even where the dominant firm has no intention of impairing competition, it might sometimes have to give its rivals a helping hand. Dominant firms thus face a dilemma: when considering a pro-competitive strategy, should they refrain because it might harm their rivals? This would act to chill competition rather than protect it.

Preventing adverse precedent

- 2.50 We acknowledge the possibility that competition authorities may, at times, wish pro-actively to 'manage' markets. For example, in regulated industries the authorities may wish to give entrants a 'helping hand' in

¹² *Michelin I*, Case 322/81 [1983] ECR 3461, [1985] 1 CMLR 282, para 57.

¹³ See Whish (2003), p189. Also, Vickers (2004) discusses a dominant firm's special responsibility and states: 'This suggests that the dominant firm must not only refrain from deliberately impairing such competition but on occasion, because of its special responsibility, might have to depart from what would otherwise be profitable in order not to cause impairment.'

some sectors even though an incumbent has not acted anti-competitively to make entry more difficult. Alternatively, the authorities may consider that a pricing structure in question is 'sub-optimal' because it does not maximise some given measure of welfare – such as 'consumer surplus' or 'total welfare'. We consider that in such cases, the authorities should be mindful of how such interventions affect the incentives of other firms within their remit to pursue beneficial pricing practices. For example, are interventions clearly case or sector specific and thus is precedent 'ring-fenced', or is there a risk that precedents established would carry over more widely?

- 2.51 We suggest that in special circumstances in which the authorities consider there are good case-specific reasons for an interventionist approach but also fear that interventionist precedent might then apply more widely, the spread of such precedent could perhaps be limited by (a) making it clear that the precedent is 'ring-fenced' to apply only to that specific case; and (b) waiving financial penalties in cases where the dominant firm can demonstrate robustly that its motivation for the practice was not to exclude an equally efficient rival.

Layout of the rest of this report

The remainder of this report is set out as follows:

- Chapter 3 provides a framework for analysing selective price cuts
- Chapter 4 provides a framework for analysing fidelity rebates
- Chapter 5 discusses *Michelin II* and whether the case law established as regards the characteristics of lawful discounts is underpinned by economic principles
- Annexe A describes the *Deutsche Post AG* case and discusses the price/cost test applied by the EC Commission
- Annexe B applies our suggested framework for the analysis of foreclosure to *Virgin/BA*

- Annexe C applies our suggested framework for the analysis of foreclosure to *LePage's*
- Annexe D applies our suggested framework for the analysis of foreclosure to *Canada Pipe*, and
- Annexe E describes the literature on applying Ramsey pricing to models of oligopoly, to highlight the problems of interventions which seek to maximise total welfare (an issue that the OFT asked us to address).

3 FRAMEWORK FOR ANALYSING SELECTIVE PRICE CUTS

Introduction

- 3.1 In this chapter we analyse selective price cuts and recommend a framework for assessing their anti-competitive effects under competition law.
- 3.2 Selective price cuts occur where a supplier selects a group of customers and charges different prices to that group compared to another group, even though both groups purchase the same product. In the extreme, each group can be one customer ('customised discounts').
- 3.3 Usually the concern is that lower prices have been targeted at a group of customers to induce them not to switch to a potential new entrant. We focus on this scenario here.
- 3.4 First we set out some stylized examples of when selective price cuts may occur in response to the threat of entry; how a new entrant may be excluded; and whether this is a result of a competition failure or not.
- 3.5 Second we consider initial screens that can be applied at an early stage to identify those cases where further, more detailed analysis is required.
- 3.6 Third, we consider possible tests for distinguishing between harm to a competitor and harm to competition. These are price/cost tests, sacrifice tests, but for tests and equally efficient competitor tests.
- 3.7 Fourth, we consider the concept of 'above cost exclusion' and the extent to which there is a case for intervention to promote entry by less efficient rivals.
- 3.8 Fifth, we note briefly the difficulty of cost tests in dynamic industries.

3.9 Finally, we set out our recommendations. We set out recommendations on 'above cost exclusion' and suggest economic principles and evidence to be applied when establishing a coherent, fact-based story of harm to competition.

Stylized scenarios of selective price cuts and exclusion (both harmful and benign)

3.10 With selective price cuts in response to (the threat of) entry, the issue is usually as follows: even though the price cut benefits some consumers in the short term, are consumers worse off in aggregate because the pricing policy harms competition with the effect that, over the long term, consumers pay higher prices (or suffer lower quality or slower innovation) than they otherwise would have done?

3.11 In this section we consider some stylized examples of what happens to market outcomes when selective price cuts occur in response to the threat of entry. We consider how an entrant may be excluded as a result. We also comment on whether exclusion is anti-competitive.¹⁴

3.12 Our aim is threefold. First, we highlight some key themes from the economics literature. These themes help us understand how and why exclusion may occur. They are general principles which inform the analysis of fidelity rebates as well. Second, we describe how exclusion is not necessarily anti-competitive. Sometimes it is a desirable outcome of competition. This is an important caveat when it comes to making the transition from the economic models to workable competition law

¹⁴ The term 'exclusion' is often thought of as referring to an anti-competitive act. However, new entrants can be excluded without there being harm to competition. In this chapter, the context should be clear whether we refer to exclusion in the latter sense or the former, ie: anti-competitive, sense. Where the context could be ambiguous, we refer to 'harmful exclusion' or 'benign exclusion' or words to that effect.

enforcement principles, since it is not the case that all cases of exclusion must be rooted in an unlawful abusive act by the dominant firm. Third, as we have fewer case studies on selective price cuts than on fidelity rebates, this section serves to provide a brief analysis of hypothetical cases.

- 3.13 To keep the analysis clear, we consider a stylized setting where a monopolist sells the same product to two independent markets, market A and market B.¹⁵ We assume that the monopolist has incurred a fixed cost that is common across the two markets (for example a production facility that makes the output destined for both A and B). Further, we assume the monopolist faces no competition in market A and that buyers in market B have the opportunity to purchase from a new entrant.¹⁶ We consider how the 'incumbent' (ie: the monopolist) might respond to the threat of entry by selectively lowering the price in market B (eg: lowering the price in B while leaving the price in A unchanged).
- 3.14 Unless otherwise stated, our discussion assumes that any customer in market B is offered the same price. Thus prices may differ among markets but within a market there is no further price discrimination (there is a given price per unit irrespective of the number of units purchased). We make this assumption to distinguish between pricing

¹⁵ These markets may be geographically distinct or they may refer to customer groups between which the firm can price discriminate. A and B may even be individual customers in which case the issue is 'customised' selective price cuts.

¹⁶ As with most firms with an element of market power, our monopolist is therefore engaged in an act of fixed cost recovery, and enjoys some discretion in how to recover its fixed costs by positive price-cost margins on the sales of its product into markets A and B.

schemes where the unit price differs according to the amount purchased – these are analysed in the next chapter.¹⁷

- 3.15 Having set the scene, we now explore a number of economic models that examine the possible pricing responses of the incumbent, and the impacts that such responses may have on market outcomes.

Example - bidding markets¹⁸

- 3.16 Suppose that market B consists of one buyer that invites the incumbent and the new entrant to tender for a one-off contract to supply 100 units of a particular product. This buyer sets a maximum price of £2 per unit.
- 3.17 The incumbent has already incurred any sunk costs of entry and so it needs only to cover variable production cost to make a profit. However, the entrant must cover not only its variable costs but also any sunk entry costs (eg: irrecoverable costs of acquiring the production technology).
- 3.18 Suppose that the incumbent produces widgets at a cost of £1 per unit and that the new entrant could do the same by sinking £50 in a widget

¹⁷ To use standard economic terminology, this chapter is primarily concerned with 'third degree' price discrimination where the supplier decides which buyers obtain which prices. The next chapter is primarily concerned with 'second degree' price discrimination where the supplier offers a discount scheme to all buyers and each buyer chooses (ie: 'self selects') which scheme it prefers.

¹⁸ Klemperer (2005) suggests that caution should be used when using the term 'bidding markets'. The following example relates to a 'winner take all' contest that is 'lumpy' (ie: one-off), however there is a first mover advantage in terms of lower costs for the incumbent and so does not meet the 'ideal' conditions for an auction. However, provided that there is full information among the parties and no costs of placing a bid, the potential entrant nevertheless provides an important constraint on the incumbent.

plant.¹⁹ The lowest price that the new entrant can bid without making a loss is £1.50. This means that the incumbent can profitably undercut by charging £1.49 per unit and thereby making a margin of £0.49 on each unit.

3.19 Here, entry is not profitable because the incumbent has a cost advantage. This cost advantage does not allow the incumbent to charge the monopoly price (ie: £2) because the threat of entry means that the incumbent must price below £1.50 in order to win the bid for customer B's business.

3.20 If the new entrant had a better product than the incumbent (and the cost of production remains the same), it could not profitably enter the market unless its product was valued by consumers at an extra £0.50 per unit above the incumbent's good. Thus, if the buyer valued the entrant's product by £0.20 more per unit than the incumbent's, the incumbent could still profitably undercut the new entrant's break even price by charging £1.29. (Notice that the new entrant's product advantage means that the threat of entry forces the incumbent to charge a lower price than before. A similar logic would apply if the entrant had a production cost advantage of £0.20).

3.21 This example demonstrates the following key points:

- where buyers in market B can play suppliers off against each other (because for example they have a credible threat to switch), selective price cuts are to be expected.²⁰ Even where the new

¹⁹ This £50 is sunk. Having made the investment, the entrant cannot recover any of this investment by reselling the factory or using the factory for some other means.

²⁰ This is a standard result that derives from the different demand elasticities facing the incumbent in the two markets. Prices are lower in the market with higher elasticity, where in this example the higher elasticity in market B is explained by the customers' option to switch.

entrant is excluded, buyers benefit from the threat of entry. In this case, exclusion may be an outcome of competition. Consumers benefit from competition because the threat of entry allows them to obtain lower prices²¹

- pricing below the new entrant's avoidable cost (ie: the cost that the new entrant would avoid incurring by staying out of the market divided by the units it would produce if it enters) means that entry is not profitable when the incumbent and the entrant produce identical goods
- the better the entrant's good (or the lower its unit production cost) compared to the incumbent's, the deeper the selective price cut required to prevent entry, and

²¹ For consumers to benefit in the long term we assume that the threat to enter the market remains because, for example, the fact that having lost the bid once does not deter the entrant bidding again in the future.

- the existence of sunk entry costs is very important in discouraging an entrant that would, having entered the market, be in a position to match the incumbent in terms of the quality of good produced and the variable cost of production. In particular, if the entrant must commit to entry before its offer is seen as credible, the incumbent's prices may not be constrained as the entrant may not wish to spend the amount necessary to commit to entry.²²

Example – 'horizontal' differentiation

- 3.22 Suppose that the new entrant offers a differentiated product that some (but not all) customers in market B prefer to the incumbent's product.²³ For example, suppose that demand in market B is such that there are 50 customers who value the entrant's product at £2.99 and 50 who value it at £1.00. All 100 customers in market B value the incumbent's product at £2.00. Each customer buys one unit only (ie: customers will not buy one unit from the incumbent and another unit from the entrant).
- 3.23 Assuming that costs are the same as in our first example and that price discrimination is not possible within market B, preventing entry would

²² Where the entrant expects price competition to be intense in a market if entry occurs (as is the case with homogenous goods and Bertrand competition), an incumbent may not need to offer a selective price cut to deter entry. The fact that the entrant expects that entry will depress the price to a level at which it will not cover its entry costs is sufficient to deter entry and so the entrant does not commit to entry by sinking the necessary entry costs. In theory, the incumbent can sink costs strategically (eg: over invest in capacity or build a reputation for being aggressive) to commit to an aggressive response to entry and thereby deter entry. However, the effective use of buyer power can counteract this problem, since a large buyer may realise that offering a commitment to purchase from the entrant will be necessary to underwrite the entrant's sunk costs.

²³ With 'vertical' differentiation all consumers value one good above another when both goods are offered at the same price. With 'horizontal' differentiation, when two differentiated goods are offered at the same price there will be demand for both products.

require that the incumbent sets a price of £1.00. In this case, even those 50 consumers who value the entrant's product at £2.99 could not be profitably served by the entrant. This is because buying from the incumbent allows them a 'surplus' of £1.00 (ie: their £2.00 willingness to pay less the price of £1.00). For the entrant to offer these customers a surplus of £1.00 per unit, it must price at £1.99. However, selling 50 units at this price generates revenues of £99.50 which is £0.50 less than the production cost.

3.24 However, the incumbent is better off 'accommodating' entry. If the incumbent charges £2.00 and the entrant charges £2.50, then neither supplier has an incentive to undercut.²⁴

3.25 The key messages are as follows:

- where the new entrant and the incumbent would not face intense price competition if entry occurs (eg: due to 'horizontal' product differentiation), selective price cuts are less likely to be employed (and if they are employed they are less likely to deter entry, see next example), and

²⁴ If the incumbent lowers price to £1.50, it will win all sales. Its profit will be £50, identical to what it receives when selling 50 units at £2.00. This is not a Nash equilibrium (as if the incumbent charges £2.00 the entrant would prefer to charge £2.99) but an 'undercut proof equilibrium' as discussed for example in Shy (2001).

- in the above example we assumed that the buyer would purchase either the incumbent's good or the rival's good. However, where goods are differentiated, buyers may wish to purchase both goods. In this case, preventing entry is less attractive because the cost of inducing a buyer to forgo the option of dealing with the rival as well is greater.²⁵ A selective price cut is less likely to harm competition where a rival can differentiate itself from the incumbent (ie: compete on factors other than just price).

Example – divide and rule strategies

3.26 Suppose that a new entrant could profitably supply both markets A and B, if it reaches a certain scale of production. Suppose that the new entrant does not need to sink entry costs. However, assume that there is a minimum efficient scale at 170 units: the entrant's production cost is

²⁵ In the scenarios considered by Bernheim and Whinston (1998), a dominant firm usually does not find it profitable to exclude a rival where the buyer would like to stock both supplier's goods ('common representation'). Exclusion occurs in two situations. First, where an integrated firm would maximise profits by exclusionary behaviour then so might a buyer and supplier working together ('rent sharing'). For example, suppose that there are two buyers in independent markets. The first buyer has the choice of dealing with one or both of two potential suppliers: the incumbent (already in the market) and a differentiated rival (who may be induced to enter). The second buyer has the choice of two suppliers only if the rival enters the market and supplies the first buyer. The authors show that denying the rival supplier the opportunity to sell to the first buyer means that the rival does not make an investment to reduce its costs and thereby leaves the incumbent supplier in a monopoly position in the second period to extract profit from the second buyer. Exclusive purchasing is profit maximising if the rent that the incumbent can extract from the second buyer exceeds the extra profit that the first buyer can generate from selling both the incumbent and the rival's products. Second, the authors also show how exclusive purchasing agreements may be used to compensate a risk adverse retailer when dealing with both suppliers does not generate substantially more value than exclusive representation. In their model, this would be bad for consumers (although it is not clear that this would generally be the case).

£1.70 per unit if it produces less than 170 units and £1.00 per unit if it produces more 170 units or more.

- 3.27 Suppose that in market A, there is demand for 300 units at any price up to £2 and in market B there is demand for 100 units at any price up to £2. So, in principle, the new entrant and the incumbent could supply both markets at £1 per unit and break even.
- 3.28 Suppose that the incumbent has a first mover advantage in that it can offer buyers in markets A and B contracts before the new entrant is able to make its offer. The incumbent can profitably offer buyers a price of £0.99 in market A. They will accept this price, knowing that the new entrant would not offer them a lower price. The incumbent can then offer buyers in market B a price of £1.69. They will accept this price knowing that the new entrant cannot profitably offer a lower price because it is unable to achieve an efficient scale of production.²⁶
- 3.29 In this example, if B entered the market and there was intense price competition, prices would be driven down to £1.00.²⁷ Thus, if entry occurred, buyers in market A will be a little worse off and buyers in market B will be a lot better off. The incumbent benefits from preventing entry. Even though it loses £0.01 on the 300 units sold in market A, it gains £0.69 on the 100 units sold in market B. We can think of the incumbent as having locked in buyers in the A market so as to deny the new entrant economies of scale in the B market. This 'divide and rule' strategy allows the incumbent to set higher prices in market B.

²⁶ The new entrant could produce 170 units at a cost of £170 (and then throw away 70 units) or produce 100 units at a cost of £170. Either way, there is no scope profitably to undercut the incumbent's price of £1.69 in market B.

²⁷ Specifically we assume the following sequence to the game. First, the incumbent offers a contract to buyers in market A. Second, the new entrant and the incumbent compete intensely on price to supply any buyers who are not already locked in to dealing with the incumbent.

3.30 This example demonstrates the following key points:²⁸

- where the incumbent has a first mover advantage and there are economies of scale, it may be able to act strategically to deny the rival the opportunity to produce at an efficient scale²⁹ and thereby charge higher prices to at least some buyers

²⁸ For an extension of these basic ideas see Rasmusen, Ramsey, Wiley (1991), Segal and Whinston (2000), Gans and King (2002) and Rey and Tirole (forthcoming 2005). The idea is that if enough buyers could coordinate, they could sponsor the entry of an efficient rival. However, buyers acting alone cannot offer the rival sufficient demand to achieve economies of scale and so new entry does not materialise. Rasmusen, Ramseyer and Wiley (RRW) put forward this notion. In their model, the smallest bribe is sufficient to persuade buyers to lock themselves in to dealing with an incumbent firm in a second period where entry may have otherwise materialised. This is because buyers are unable to second guess what other buyers will do. They consider themselves better off obtaining a small discount from the monopoly price than taking the risk that entry does not occur in the second period and paying the full monopoly price. In effect, the buyers end-up in the equilibrium that is worse for them. The paper would appear to assume that buyers are final consumers, although the coordination failure logic extends to intermediate buyers being unable to sponsor new entry. In a response, Segal and Whinston (2000) provide an alternative (ie: re-negotiation proof) version of the RRW result. They point out that the possibility of explicit discrimination among customers enhances the scope for successful (harmful) exclusion. This draws from a divide and conquer strategy. The incumbent offers an advantageous exclusionary contract to a limited number of 'favoured' customers and leaves the 'unfavoured' customers with no surplus – the latter group are not large enough to sponsor entry. The terms of the contract should guarantee that the favoured customers do not have any interest in coordinating with the unfavoured group (ie: the equilibrium is re-negotiation proof). Thus, in this case to achieve exclusion there is no need for buyers to coordinate on an equilibrium that is sub-optimal for them.

²⁹ The same would be true in markets with network effects where a consumer's valuation of the product depends on the size of the consumer group that uses the same product or industry standard. Consider for example a hypothetical market for text editor software where there are only two potential customers and where the entrant's software is not compatible with the incumbent's software. If the incumbent captures the first customer, this would lead the second customer to value the incumbent's product more than the entrant's where the second customer wants to use a technology compatible with the first customer.

- unlike traditional models of predatory pricing, losses may be recouped 'immediately' in the sense that below cost prices in one market may enhance the ability to charge higher prices in another market, and
- some buyers may benefit (ie: those buyers who have the potential to allow entry to occur at an efficient scale and so who must be 'paid off' for not dealing with the entrant).

Example – response to entry in intermediate market

- 3.31 Suppose that the monopolist sells into intermediate markets. Assume that buyers in B use the incumbent or the entrant's good as an input to a final good which they sell in a downstream market and that buyers in A can only buy from the incumbent (and sell into a different downstream market).
- 3.32 Where buyers who purchase the entrant's good compete with buyers who purchase the incumbent's good in the downstream market, new entry may create an incentive for the incumbent to lower prices in market B for those buyers who continue to purchase from the incumbent. The idea here is that the incumbent's buyers in that market may face greater competition in the downstream market which makes their demand for the incumbent's good more price sensitive.
- 3.33 The key points here are that:
- the incumbent may use the selective price cut to prevent its buyers losing share in the downstream market to buyers that switch to the new entrant. This is more likely where the input supplied by the dominant firm is an important influence on the price of downstream good. The selective price cut may increase competition in the downstream market, and
 - in this scenario, foreclosure is unlikely if the incumbent cannot profitably target those buyers who deal with the entrant directly. This is because foreclosure would require inducing the incumbent's

downstream buyers to price at such a low level that they win sales from the entrant's buyers to such a degree that the entrant is forced to leave the market.³⁰

Example – defensive leverage

- 3.34 Suppose that if an entrant makes headway in market B, this will eventually provide the base to mount an attack on market A. The incumbent therefore has a strong incentive to fight off the new entrant in market B to protect its position of strength in market A.
- 3.35 The key points here are:
- selective price cuts may be used to defend a position of market power. Unlike the textbook story of predatory pricing where losses are recouped by the enhanced market power that arises from forcing

³⁰ Fumigalli and Motta (2003) argue that divide and rule strategies may fail in intermediate markets where the new entrant can target a buyer with low prices and where that buyer finds it profitable to pass on lower prices to consumers so as to expand demand for the entrant's product sufficiently to allow the entrant to obtain an efficient scale. The buyer's ability to expand demand depends upon a high input price paid by other buyers locked in to the incumbent. On the other hand, Simpson and Wickelgreen (2001) argue that intermediate markets may facilitate (harmful) exclusion where the supplier can create a prisoner's dilemma. An intuitive explanation is as follows. Suppose an entrant needs to operate in the market for one period at a high cost before it can match the incumbent's lower cost. An incumbent exploits this advantage by offering a first period discount for exclusivity to buyers that compete in a downstream market. Buyers would gain from competition between the incumbent and the entrant in the second period. However, this creates a free rider problem. If one buyer deals with the new entrant in period one (which ensures supplier competition in period two), the other buyer would do better to deal with the incumbent (as, in period one, it would obtain a lower price and benefit from the fact that the other buyer would face a higher input price). As a result, both buyers have a dominant strategy not to deal with the entrant in period one. The entrant cannot match the incumbent's first period price because it competes for the right to earn duopoly profits while the monopolist is seeking to protect its monopoly profits (the latter exceed the sum of profits in duopoly apart from in the special case of perfect collusion).

a rival out of a market, in this case the issue is that market power is protected – prices remain higher than they otherwise would have done³¹

- total exclusion is not necessary for harm to competition. The selective price cut may leave room for the rival to remain in the market but force the rival to operate at an inefficient scale and thereby act as a weaker competitive constraint, and
- the incumbent's below cost pricing will not necessarily exclude a rival in market B if it believes that market B is a gateway to higher profits in market A. It depends on (a) the entrant's expectations of the profits that will be earned if it enters market A and (b) whether the incumbent finds it profitable to price so low in market B that the entrant's expected profits in market A will not be sufficient to entice entry.³²

Example – bundling and endogenous switching costs

3.36 Up to this point we have assumed that all buyers in market B are offered the same price. In this case we consider an exception. Suppose that buyers purchase in both the A market and the B market. In response to the threat of entry, the incumbent could (under some circumstances) offer a discount on its A product to buyers who also purchase its B

³¹ Carlton and Waldman (2002) exploit this concept to show how bundling can harm competition. By keeping a rival small in the first period (in their model by refusing to supply a complementary good), the rival is denied the opportunity to operate at a scale sufficiently profitable to 'enter' the A segment in the next period.

³² Where the new entrant would not replace the incumbent in market A (eg: because the entrant has a similar product but not a better one), it will be easier to exclude the rival and harm competition. This is because the incumbent would protect its monopoly profits while the rival would gain only duopoly profits.

product and thereby exclude the entrant. This form of bundling A and B may be thought of as selective price cutting in the sense that buyers in B obtain a lower price if they also purchase the A product.

3.37 The key points from the related literature are:

- the incumbent can create a switching cost by penalizing buyers in the B market (by withdrawing their discount in the A market) if they switch to the new entrant. This is most likely to be effective where there are many buyers who purchase in both the A and B markets and few buyers who purchase in either the A or the B market only
- foreclosure is more likely to be profitable where the entrant cannot replicate the incumbent's bundle (ie: because there are entry barriers to the A market)
- foreclosure is less likely where A and B are complementary goods and the dominant firm competes with a more efficient producer of the B product. In this case, the dominant firm would do better to allow the efficient firm to produce the B product – the resulting lower price of B would expand demand for A, where the dominant firm earns its monopoly margin, and

- tying purchases in a monopoly market with purchases in a second market where there is a threat of entry can deter entry where consumers would buy either the bundled product or the entrant's product but not both and where bundling is irrevocable.³³

3.38 These points are discussed in more detail in the next chapter.³⁴ It should not be inferred from this discussion that bundling is always harmful – bundling may benefit competition and consumers as well, even when employed by dominant firms.

Conclusion on theoretical models

3.39 We have discussed stylized scenarios which explained why selective price cuts might occur and how they might prevent entry.

3.40 The examples demonstrate how the existence of sunk entry costs, economies of scale in production and network effects can create the conditions under which pricing behaviour can lead to the foreclosure of a new entrant.³⁵ Total exclusion is not necessary for harm to competition where a rival is forced to operate at an inefficient scale and thereby act

³³ See Whinston (1990) for a discussion of the exact conditions. The intuition is that by bundling its products, the incumbent commits to aggressive pricing if entry occurs. The entrant knows that the incumbent will always offer better value for money so as not to forgo the opportunity to sell the monopoly product. This model may not apply when the A good and the B good are strong complements. In this case, if the entrant is more efficient at producing the B product, it would be better for the incumbent to have that entrant offer a low price for the B product to increase demand for the A product where it earns a high margin.

³⁴ See also Nalebuff (2003) for a review of bundling.

³⁵ The flip side is that where the entrant already has most of the relevant production requirements (including reputation and scale) it is less likely to be excluded. For example, an entrant using similar assets to the incumbent and producing a similar product in a different market may be well placed to enter the incumbent's market.

as a weaker competitive constraint. We also noted that exclusion is less likely when the entrant produces a differentiated good (ie: a product that at least some consumers would value more than the incumbent's good if both are priced at the same level).

- 3.41 In some instances, consumers were not harmed by the absence of entry – this was an outcome of competition. In other instances, some consumers gained while others lost. There is no support in economic theory for a presumption that when an incumbent responds to the threat of new entry by selectively lowering prices that this will harm competition and consumers. We also noted that the theories of foreclosure are best developed for firms that might be termed 'super dominant'.
- 3.42 The economic models often aim to demonstrate how a certain pricing practice may lead to a 'sub-optimal' outcome compared to some welfare-maximising benchmark. However, we should not infer from the economic theory that every outcome which generates exit, or even every outcome that is sub-optimal for consumer welfare, must be rooted in an abuse of the kind that merits intervention under a competition law instrument such as Article 82 or the Chapter II prohibition.
- 3.43 Although the economic models can usefully illustrate the mechanisms by which foreclosure can occur, on their own they do not offer practical guidance as regards when intervention is appropriate and what the remedies should be. However, we can take economic principles from these models to establish a framework in which selective pricing cases can be addressed. This is the focus of the rest of this chapter.

Initial screens

- 3.44 We now turn to some initial screens that may be useful to discuss cases at an early stage because there is unlikely to be harm to competition.

Assessment of market power

- 3.45 Market power is the initial screen. If the firm offering the selective price cut does not have market power, its pricing practices will not harm competition. Most of our discussion takes dominance (ie: substantial market power) as given. We consider the analysis of pricing practices by firms that have already been found to have substantial market power based on an independent analysis of dominance.³⁶

Alternative routes to market sufficient to become a viable competitor

- 3.46 Foreclosure relates to a market and not to any particular customer. Thus, even if the selective price reductions of a dominant firm are targeted at certain buyers in a way that induces them not to buy from a rival supplier, it is still important to consider whether the entrant could make headway by selling to other buyers.³⁷
- 3.47 In addition, in intermediate markets, the entrant may be able to 'forward integrate' (ie: establish its own downstream operations to avoid the need for selling to pre-existing buyers) if entry barriers to the downstream market are low.

³⁶ By independent analysis of dominance we mean an assessment which does not infer dominance solely from the practice under investigation. For example, we would not advocate a finding of dominance on the basis that a firm is able to price discriminate. Price discrimination is sustainable (and often desirable) in competitive markets where firms have fixed costs to recover. See for example, Armstrong and Vickers (2001) discussed at Annexe E.

³⁷ This is one of the key reasons why form-based rules cannot generate coherent policy outcomes in this area. A form-based prohibition on discounts that induce exclusive dealing between a dominant firm and a customer cannot discriminate between the scenarios in which that customer accounts for 0.5 per cent or 50 per cent of the sales opportunities open to entrants, yet the impact of the practice on market foreclosure must vary between these cases.

- 3.48 The entrant may even be in a position to miss out the intermediate stage and sell directly to final consumers. This would be more likely where there are large buyers, relatively few economies of scope or density in distribution, or the intermediate stage adds little extra value to the product.³⁸
- 3.49 Overall, there should be scope for the rival to access the market on a scale sufficient to be a viable competitor.

Effect on buyers' incentives to deal with the entrant

- 3.50 We have argued above for an effects-based analysis of abuse. This means that the fact that a dominant firm has offered a selective price cut in response to entry is not sufficient to demonstrate harm to competition. Such a strategy would be expected. Even firms without substantial market power would be expected to lower prices in areas where demand for their brands is more elastic, and increased competition from new entrants is one of the most plausible reasons for expecting higher brand-level elasticity.
- 3.51 Therefore it is important (although not sufficient) to demonstrate that the entrant will suffer as a result of the pricing policy. Thus, if the selective price cut in question is very limited or the reduction in price so small that it is unlikely to have a marked effect on buyers' incentives to deal with the entrant, the case can be dismissed at an early stage (even if the buyer's demand does represent a significant part of the opportunities open to the entrant).

³⁸ If there are economies of scope, it is more cost efficient to distribute several different products together than to distribute them separately. Where there are economies of density, average costs fall the more clustered are deliveries. Both factors may mean that specialist distributors are required, meaning that it is difficult to 'miss out' the intermediate stage and supply direct. In addition, where the intermediate stage adds substantial value (eg: through product promotion), it may also be difficult to miss out that stage and supply direct.

- 3.52 Not all buyers will have the same incentives and so care should be taken to consider how each buyer type is likely to be affected. For example, if only a few buyers face strong incentives to buy from the incumbent, the entrant may not be affected.
- 3.53 Of particular importance is to assess whether the strongest incentives to deal with the dominant firm are focused on the most important buyers (ie: the most important route to market for the rival).³⁹

Distinguishing harm to competition from harm to competitors

- 3.54 Having got passed the initial screens, we face the difficult question of whether the selective price cutting behaviour in question:
- (a) harms the entrant but does not harm final consumers, or
 - (b) ultimately harms consumers by weakening the process of competition.
- 3.55 In this section we discuss possible ways to distinguish between case (a) and case (b) above drawing on principles in the economics literature that have been used to analyse predatory pricing. We conclude that pricing above avoidable cost (appropriately measured) should be presumed lawful.

Cost definitions and benchmarks

- 3.56 We start the discussion by considering cost definitions and price/cost benchmarks. Price/cost tests are inherently form-based measures of conduct and thus such tests alone are not sufficient to demonstrate anti-competitive behaviour. Nevertheless, their attraction lies in their ability, if properly used, to identify pricing behaviour that attracts justifiable

³⁹ See the discussion of *Dentsply* in the next chapter.

suspicion, and to define plausible safe harbours for dominant firm pricing.

3.57 In this section we define the following cost benchmarks:

- avoidable costs
- incremental costs
- variable costs

3.58 We conclude below that the appropriate way to measure costs depends on the question that we seek to answer. Asking the correct economic question should lead the analyst to the appropriate measure of costs.

Avoidable and incremental costs

3.59 The idea of an avoidable cost test is to compare those costs that would be avoided by ceasing to undertake a particular activity with those revenues that would be lost from ceasing to undertake that same activity.

3.60 The idea of an incremental cost test is similar. From any given benchmark, we compare the incremental costs of a particular strategy with the incremental revenues from that strategy.

3.61 The definition of avoidable and incremental costs is not consistent in the economics and policy literature as it depends on how we define an 'activity', the 'benchmark' and the 'strategy'.⁴⁰ These measures also

⁴⁰ For example, Bolton et al (2000), define avoidable costs with respect to the predatory increment and so in some senses merge the two concepts: 'Average avoidable cost (AAC) is the average per unit cost that the predator would have avoided during the period of below-cost pricing had it not produced the predatory *increment* of sales' (p2271, emphasis added). The measure of costs depends crucially on what the 'predatory increment' is defined to be.

depend importantly on the time period concerned.⁴¹ When the correct economic question is asked, the use of avoidable and incremental cost concepts will provide the same answer.

3.62 We highlight different measures of cost in the following examples.⁴²

3.63 Consider a new entrant that can produce widgets at £1 per unit if it first sinks a fixed cost of £50 (say, in order to buy a widget producing machine that has no value outside of the widget industry; we also assume the machine lasts for one year). Consider also a dominant firm ('Domco') with the same production technology that sunk its £50 fixed cost six months ago. Assume that Domco is observed to have produced 100 units in the last month. Consider the following possible cost assessments:

- short run avoidable cost: If we define the activity as 'producing widgets last month' then if the dominant firm had stopped production it would have avoided spending £100. Thus its avoidable cost is £100. However, in the case of an entrant that entered the market last month, it would have incurred the £50 fixed cost as well.

⁴¹ Some regulators refer to incremental costs as a long term measure of avoidable costs. We do not adopt this convention.

⁴² See also the case study of *Deutsche Post AG* at Annexe A. Here we explain how the EC Commission considered that the relevant time period was six years and that within that time period all incremental costs associated with providing mail order parcel services were avoidable. The Commission took as given common costs, ie: those assets required to provide Deutsche Post's universal service obligation and considered only those additional costs of providing the mail order parcel service. All directly attributable costs of this activity were deemed avoidable since over a six year period Deutsche Post would have had scope to recognise that its service was not incrementally profitable and either raise prices or dispose of the relevant assets.

Had the entrant entered and produced 100 units last month, its avoidable cost would have been £150

- short run incremental cost: If we define the benchmark as 'producing nothing' and the strategy as 'producing 100 units next month' then the incremental cost is £100 (if we take the fixed cost as already sunk) or £150 (if we take the fixed cost as yet to be sunk)
- short run incremental cost (with capacity constraints): Suppose now that our benchmark is producing 100 units and we consider the cost of producing an extra 100 units (ie: the increment is the same as in our last example but the benchmark is different). If there is capacity to produce another 100 units per month the incremental cost is £100 as before. However, if full capacity is only 100 units then the incremental cost of producing an extra 100 units would include the costs of expanding capacity for that month (eg: the costs of buying or hiring new production equipment)
- long run avoidable cost: Suppose that the fixed cost of entry is expenditure on a durable good that lasts for one year. If we define an activity to be 'producing 1200 units annually' then the avoidable cost would be £1250. (If instead of producing 100 units per month for 12 months a firm had not produced at all, it would have avoided all costs)⁴³
- long run incremental cost: Suppose in the previous example the benchmark is 'zero production' and the increment is '1200 units over a one year period'. In this case long run incremental cost is £1250, and

⁴³ We are not suggesting that the long run is always one year, only that the longer the time period in question the more costs are likely to be avoidable.

- long run incremental cost with the opportunity to change technology: Suppose that we are considering the cost of producing 6000 units over five years. With the incumbent firm's existing technology this would involve a fixed investment of £50 at the start of each year and a cost of £1 cost for each unit. The total incremental cost would be £6250. However, suppose that the longer time period means that it is worthwhile investing £200 in a more durable widget producing machine which lasts for five years (and thereby avoids the need to spend £50 a year on the other type of widget producing machine). In this case the incremental cost is £6200.⁴⁴

Variable costs

3.64 Variable costs are usually defined as those costs that vary directly with output while fixed costs do not change at all as output changes. However, it is important to distinguish economic measures of 'variable' and 'fixed' costs from accounting cost measures. The longer the time period under consideration, the more likely that fixed costs can be varied at least to some degree. This can lead to disputes as to what costs are 'fixed' and what costs are 'variable' over a particular time period. For example, in our example above, we might think of variable costs as being £1 per unit as these costs vary directly with output. However, the £50 'fixed' cost is variable for the new entrant over the range zero to one unit. In addition, the fixed cost may also be variable over time in the sense that it must be incurred annually to produce and so the incumbent has a choice whether or not to re-incur the cost every year.

⁴⁴ With time periods which exceed one year, we should discount expenditures and revenues by an appropriate interest rate. For example, the £200 investment at the beginning of year one is not necessarily better than an investment £50 at the beginning of each year if the interest rate is high enough. For simplicity, we have ignored this point.

3.65 Avoidable and incremental cost concepts are a more helpful tool to reduce semantic points as to whether a cost is 'fixed' or 'variable', and to focus the analysis on the real consequences of firms' decisions and choices (Baumol, 1996). A more precise question is to ask whether a cost was deliberately incurred as part of a predatory activity or strategy – if so, the cost was 'avoidable' or 'incremental'.

The relevant time period

3.66 While there may be good theoretical arguments for the use of an avoidable or incremental cost measure over an average variable cost measure, there are nevertheless practical issues involved in measuring the correct cost base. These include whether accounting measures adequately allow the authorities to measure economic costs and revenues and, of particular importance, the relevant time period.⁴⁵

3.67 The relevant time period for assessing an alleged predatory low price is usually the time period over which the alleged predatory price prevailed, or could reasonably have been expected to prevail.⁴⁶

3.68 In general, the longer the period in question, the more costs that become avoidable (or incremental). For example, if the incumbent has to incur a fixed cost of production every January, then it might be reasonable to treat this cost as given for an allegation of predatory pricing confined to the month of June. However, if the incumbent is alleged to have predated from June 1998 to June 1999, then it will have had to incur the fixed cost in January 1999 in order to remain in the market, and it

⁴⁵ For example, long run measures of cost may seek to account for all product specific costs, including investments in plant and machinery as well as marketing and R&D expenditures. This raises the issue of whether assets should be measured at replacement cost or historic cost.

⁴⁶ OFT (414a), paragraph 4.4. This definition was proposed by Baumol (1996).

becomes valid to ask the incumbent how it justified incurring that fixed cost.⁴⁷

- 3.69 This means that in cases where the issue is how long the alleged low price could 'reasonably have been expected to prevail' there is considerable scope for disagreement. The dominant firm would probably argue for a relatively short period (which usually implies lower avoidable costs), while the complainant would argue for a longer period.
- 3.70 Since revenues must be assessed over the same time period as costs, there is also the issue of what revenues would have been earned over that time period. For example, suppose the authorities have access to a dominant firm's long term pricing forecast. When considering what weight to place on this evidence, there may be a need for the authorities to discount any revenues that were forecast to arise from foreclosure. Where such forecasts do not exist, there is further scope for disagreement. For example, is it reasonable to assume that the current 'price' would remain at that level over the long term?⁴⁸
- 3.71 This suggests a role for sensitivity tests. Where the outcome of a price/cost test is not sensitive to the choice of time period, greater weight can be placed on the test. In particular, if under most reasonable assumptions prices are above long run measures of cost, this would

⁴⁷ Thus, in our preceding example, if the question is whether the activity of 'producing widgets for the 12 month period starting June 1998' is profitable or not, we would expect the revenues to cover not only the £1200 variable costs but also the £50 fixed cost.

⁴⁸ For example, new products may be priced according to a life cycle where, say, the introductory price is relatively low and then the price is increased as demand increases. On the other hand, in markets where quality changes rapidly (such as PCs), a product may be priced high while it is the technology leader, and then be priced at successively lower levels as it becomes more and more out of date.

suggest that the pricing behaviour is lawful because long run measures of avoidable (or incremental cost) tend to exceed short run measures.

3.72 On the other hand, where the outcome of the price cost test is sensitive to the time period chosen, and where there is no clear basis for adopting one candidate time period over another, this means that avoidable cost tests are less informative.⁴⁹

3.73 For example, in some IP industries and utilities, sunk expenditures are very large in relation to running costs with the effect that long run cost measures are very much higher than short run avoidable costs (which can be zero in IP industries). This can mean that price/cost tests are less applicable because of the sensitivity of the measure of costs to the time period chosen.

How might price/cost tests be employed?

3.74 We noted that price/cost tests alone can never provide a complete prescription for the application of competition law as they are form-based tests. Their attraction lies in their ability, if properly used, to identify pricing behaviour that attracts justifiable suspicion, and to define plausible safe harbours for dominant firm pricing.

3.75 The relevant measure of cost and revenues depends on the question to be addressed. Cost benchmarks may be used as an input to a wider enquiry about dominant firm pricing in the following ways:

- to identify profit sacrifice

⁴⁹ Sometimes there will be a clear basis for choosing the time period. For example, if in response to entry a firm contractually commits to a certain price for three years then, even if the contract had run only six months, it would be reasonable to expect the price to apply to the end of the contract.

- to identify behaviour that makes no sense but for harm to competition, and
- to identify whether an equally efficient competitor would be excluded.

3.76 We discuss these issues in the following sections. We conclude below that the appropriate measure of cost relates to identifying whether an equally efficient competitor would be excluded over the relevant time period – this measure is avoidable cost (although appropriately defined measures of incremental cost may be equally well suited to this task).

Profit sacrifice tests

- 3.77 Profit sacrifice occurs when a firm adopts a strategy that is less profitable than an alternative strategy that it could have pursued. In theory, profit sacrifice is helpful in an analysis of alleged abusive low pricing because where a firm deliberately departs from a more profitable strategy, it seems reasonable to ask the firm to identify the planned method of recouping that lost profit.
- 3.78 However, in practice there is considerable difficulty distinguishing between anti-competitive intentions and legitimate strategic decisions or genuine business mistakes. Firms do not have perfect foresight and so will not always pursue the strategy that maximizes profits (irrespective of whether that strategy is anti-competitive or not). Moreover, competition authorities do not have perfect information, and this places a serious restriction on their ability to identify correctly situations where firms have truly engaged in profit sacrifice. We discuss these issues further below.
- 3.79 Sacrifice tests often relate to short run behaviour by a firm. In this case the question is: could the firm have followed an alternative strategy that would have been more profitable in the short run? In this case, the definition of 'the short run' would usually be the period over which the alleged low price lasted or could reasonably have been expected to last.

3.80 Consider two examples. First, in a traditional predation story, a dominant firm deliberately sacrifices profit in the short term to exclude a rival and – as a result of exclusion – the dominant firm can recoup its losses over the long term. Thus short term profit sacrifice is linked by definition to the analysis of predatory pricing.⁵⁰ However, this does not mean that identifying short run sacrifice is sufficient to identify harm to competition. We would still need to identify the mechanism for predatory pricing: how is the rival (in this case the new entrant) excluded by the act of sacrifice? How, as a result, do consumers end up suffering from higher prices in the long term? (We discuss recouping losses below).⁵¹

⁵⁰ Sacrifice need not refer only to lowering prices. Predatory investment is also possible in theory, eg: investment in 'fighting capacity'. Consider two possibilities. First, a firm invests in excess capacity as a commitment to aggressive pricing should entry occur. The existence of the capacity itself may be sufficient to deter the new entrant even though the capacity is never required. In this sense the excess capacity is a short term sacrifice or an 'investment in market power'. Second, the capacity might be used to fight the new entrant. In this case, during the fighting stage, prices may exceed cost but only generate sufficient funds to cover the initial investment if the exclusionary strategy is successful.

⁵¹ Demonstrating the mechanism for predatory pricing is not straightforward. Most of the modern theories of predation argue that for predation to be a rational strategy requires the presence of asymmetric information (see Tirole, 1988 and Ordober and Saloner (1989)). The first, mainly developed by Milgrom and Roberts (1982) and Kreps and Wilson (1982) put forth that, in case of a firm facing possible (multiple) entrants, predatory behaviour upon entry can be a rational way of building up a reputation if there are informational asymmetries. By pricing low a firm signals that he is a tough competitor and scares its rival who does not know the predator's true cost structure. This informational asymmetry theme was further developed by Saloner (1987) who shows that under similar circumstances predation can be used as a device to convince a rival to accept a merger offer. Another rationalization which follows mainly due to Fudenberg and Tirole (1986) is that when there are capital market imperfections, a financially strong firm, one with a 'deep purse', can drive a rival with less resources out of the market due to accrued losses resulting from low pricing. See Bolton et al (2000) for a discussion of how these theories might be tested against the evidence.

- 3.81 Second, consider a firm that prices below cost in the short run to invest in a customer base which would allow losses to be recouped in the long term through achieving economies of scale or network effects.⁵² This is a legitimate business reason for pricing below cost that does not necessarily rely on foreclosing a new entrant to be profitable, and that could also be matched by a smaller rival that made a similar calculation on the merits of investing in customer acquisition.⁵³
- 3.82 In theory, a sacrifice test is informative where the authorities show that the firm could have reasonably pursued an equally or more profitable strategy less likely to lead to foreclosure.
- 3.83 However, this raises the following practical problems. First, how do we identify the counterfactual – ie: the alternative strategy with which the strategy in question is to be compared? We should not use the benefit of hindsight to find any strategy that would have been more profitable. We must ask whether the alternative strategy was knowable and likely to have been considered at the time.⁵⁴

⁵² Usually sacrifice tests relate to loss making in the short run that is recouped in the long run. However, sacrifice tests may also be product specific. For example, a supermarket may price a good below cost even in the long run as a loss leader to encourage consumers to purchase other goods in the store on which positive margins are made. In this case, if we focus only on the accounting profits earned on the loss leader, there would appear to be profit sacrifice. However, in economic terms the strategy could be profitable due to the extra profits generated on other goods.

⁵³ This differs from the classic predation story, where there is a clear asymmetry between the dominant firm's pay-off from investing in successful predation in period one (ie: monopoly rents in period two) and the smaller rival's pay-off from staying in the market by accepting below-cost pricing in the short term (ie: competitive returns in period two).

⁵⁴ See Edlin and Farrell (2003).

- 3.84 In some instances, this exercise may be feasible. However, this exercise is particularly difficult in the situation where an incumbent responds to new entry. This is because the profit maximising response is usually to lower price in response to entry. This means that the authorities could at best employ only crude measures of sacrifice (eg: show that the price reduction was so great that it led to pricing below avoidable cost). The authorities would not have the necessary information to make subtle judgments as to whether one strategy would have been more profitable than a similar strategy.
- 3.85 Indeed, one of the advances in the theoretical analysis of predation has been to demonstrate rational theories of predation in which the predator uses a low price to signal weak demand, over capacity or aggressive behaviour and thereby deter the entrant from investing further. However, from a practical point of view, if the theory relies on the fact that the rival cannot distinguish the cause of the low price, this does not bode well for the authorities being able to distinguish whether the low price was predatory or reflecting market conditions.⁵⁵
- 3.86 Second, what does an alternative strategy 'less likely to lead to foreclosure' mean? This statement is meaningless without a theory of (a) exclusion and (b) how that exclusion harms competition.
- 3.87 Third, is the implication of a profit sacrifice test that dominant firms are obliged to behave like short run, profit maximising monopolists? This would not be appealing – many investments (whether by monopolists or competing firms) incur loss making in the short run.

⁵⁵ In general, rational theories of predation rely on an asymmetry of information between predatory and prey. The fact that the prey, who would normally know market conditions better than the authorities, suffers from an information shortfall makes it harder for the authorities to distinguish predation from benign practices. Nevertheless, the authorities are in a position to gather information from all market participants which helps to give a more rounded view which alleviates the information shortfall in part.

3.88 In short, evidence of profit sacrifice may be informative that some 'strategic' action is taking place (ie: an action that is profitable due to its effect in later time periods or in other markets) but this is not sufficient evidence for abuse as strategic behaviour includes legitimate practices as well as anti-competitive behaviour. Therefore evidence of profit sacrifice does not avoid the need for identifying a coherent story of how the practice in question harms competition and for testing that theory with other facts available.⁵⁶ In particular, there are many reasons why firms without market power would price below cost (or otherwise incur sacrifice) in the short or long term and so we should not infer that when a dominant firm prices below cost that this is necessarily anti-competitive.⁵⁷

Behaviour that makes no economic sense but for harm to competition

3.89 In this section we consider the 'no economic sense' test as applied to selective price cuts (our discussion carries over to the analysis of fidelity rebates as well).⁵⁸

⁵⁶ Alternatively, this is to re-assert that a form-based rule to distinguish lawful from unlawful behaviour cannot provide a reliable guide, however attractive such a rule may seem. Vickers (2004) notes: '...while the sacrifice test might be useful in assessing wilfulness or intent, it does not naturally yield a substantive standard of what behaviour is exclusionary. There is no escape from the fundamental question of what is harm to, or distortion of, competition.'

⁵⁷ OFT (414a) provides several examples for why pricing below average variable cost on a product might be a sensible business strategy without an anti-competitive motive (paragraph 4.12).

⁵⁸ Werden (2005b) considers that the 'no economic sense' test has been applied successfully by the Department of Justice in the United States in several cases, many of which do not involve predation, selective price cuts or fidelity rebates. Our discussion in this section does not focus on all cases of harm to competition, but only the application of the 'no economic sense' test to investigations concerning selective price cuts and fidelity rebates.

- 3.90 According to Werden (2005a), recently there is growing recognition of the fact that short term profit sacrifice is neither necessary nor sufficient to make conduct anti-competitive. Werden argues that a better test is the 'no economic sense' test – ie: the idea that behaviour makes no economic sense but for its likely anti-competitive effect.⁵⁹ He argues that while evidence of profit sacrifice may be relevant evidence when applying this test, sacrifice is neither necessary nor sufficient to 'fail' the test.⁶⁰
- 3.91 There are two prongs to the 'no economic sense' test: (a) identify the potential harm to competition;⁶¹ and (b) identify whether the conduct giving rise to that potential harm is *more profitable* than alternative

⁵⁹ Werden (2005b) notes: 'Application of the 'no economic sense' test is conceptually straightforward. If conduct allegedly threatens to create a monopoly because of a tendency to exclude existing competitors, the test is whether the conduct likely would have been profitable if the existing competitors were not excluded and monopoly was not created. If conduct allegedly maintains a monopoly because of its tendency to exclude nascent competition, the test is whether the conduct likely would have been profitable if the nascent competition flourished and the monopoly was not maintained.'

⁶⁰ Werden (2005a and 2005b) argues that profit sacrifice can not be sufficient to make a conduct anti-competitive because a substantial part of the process of competition involves sacrificing current profits for the prospect of higher future profits. Investments in R&D and capital equipment tend to generate short term profit sacrifice. Ordinary investments of such sort are not anti-competitive under the 'no economic sense' test because they either make sense apart from tendency to eliminate competition or they do not have such a tendency.

⁶¹ We refer to no economic sense but for harm to competition, as opposed to 'but for exclusion'. This is because some pro-competitive conduct makes sense *only due to exclusion* – such as when competition takes place for the market.

strategies that might reasonably have been considered *only due to the harm caused*.⁶²

- 3.92 Our understanding of this test is that the first prong is an initial screen (ie: demonstrate that the challenged conduct has some likelihood of harming competition) and the second prong is an important evidence gathering stage under which the story of harm is tested fully against the facts.
- 3.93 The second prong can make the test difficult to apply in investigations of selective price cuts (as well as predation and fidelity rebates). This is because there is a requirement to demonstrate that other plausible strategies (that the dominant firm can reasonably have been expected to have considered) would have looked, at the time, more profitable than the chosen strategy, *where the latter is modified to exclude the gains arising from anti-competitive harm*. To put it another way, the second prong tests whether it is only the anti-competitive effect that makes the chosen strategy more profitable than other strategies.⁶³
- 3.94 Put differently, the test is similar to a 'long term sacrifice test' where the profitability of the (long term) strategy in question (modified to exclude the likely gains from anti-competitive harm) is compared with the profitability of an alternative (long term) strategy that might have been less likely to lessen or to eliminate competition.

⁶² It might be tempting to argue that the second prong is a test of intent. However, Werden (2005b) argues that the 'no economic sense' test is not a test on 'intent' and that 'what matters are the objective economic considerations for a reasonable person, and not the state of mind of any particular decision maker.' In short, would a reasonable business person have carried out the challenged conduct even absent any gains from anti-competitive harm.

⁶³ In this regard it is interesting to note the (wide) definition of predation adopted in Bolton *et al* (2000) who define a predatory price as one that is 'profit-maximizing only because of its exclusionary or other anticompetitive effects' (p2243).

- 3.95 Therefore, as Werden acknowledges, the test suffers from the problem noted above that there may be considerable difficulty distinguishing between anti-competitive motives and genuine business mistakes.⁶⁴ Moreover, when applied to selective price cuts and fidelity rebates (and predation), there may be considerable practical difficulties in measuring profitability. In particular, attempting to strip out the gains that (are likely to) arise only due to harming competition is problematic. This exercise would entail sorting the (likely) gains from the challenged conduct into those that are legitimate and those that are not. The former would then be compared with the costs of the challenged conduct to see if the resulting incremental profit exceeded that from a counterfactual strategy.
- 3.96 Our suggested approach, discussed further in the recommendations section below, has similarities with the 'no economic sense' test in that we argue it is crucial to identify a coherent story of harm that is supported by the facts to an appropriate standard of proof. We also advocate that where the challenged strategy can be substantiated by objective and credible legitimate commercial justifications, this should count heavily in favour of the dominant firm.

⁶⁴ Werden notes that the application of the test requires a well defined 'but for' and alternative scenarios and so works best when there are relatively few plausible strategies that the firm under investigation could have pursued. The test should be based on reasonable expectations at the time of the conduct, precisely because many business decisions turn out to be unfortunate ex-post. Similarly, some decisions that seem to be non-exclusionary may result in exclusionary effects at a later time and they should not be condemned ex-post. Werden also notes that the test is not equally applicable to all situations. For example, it would not be well suited to analyse bundled rebates which can easily make economic sense due to price discrimination even when there is no elimination of competition.

3.97 However, when considering selective price cuts and fidelity rebates (and predation), we would not usually advocate comparing long term strategies with a view to assessing whether the challenged strategy (modified to strip out the likely gains from exclusion) would be less profitable than an alternative, less exclusionary strategy. In general, the latter exercise would be very hard to carry out with any reasonable degree of precision.⁶⁵

Equally efficient competitor tests

3.98 The equally efficient competitor test seeks to put into application the idea that if competition promotes the survival of the most efficient firms, taking action against a dominant firm's alleged anti-competitive behaviour would be justified only where it is clear that such behaviour is designed to harm rivals that are equally or more efficient firms than the dominant firm.

3.99 Cost tests may help in this regard. For example, where a dominant firm seeks to use low prices to oust a rival that is already in the market, Baumol (1996) has argued for an avoidable cost test. The basic idea is appealing. Where two firms produce an identical product and have already made any sunk investments required to produce, if the dominant firm wins share from its rival by pricing at or above avoidable cost, an equally efficient rival should be in a position to win that share back. If an equally efficient rival cannot profitably reclaim its share, it must be because the dominant firm has priced below its own average avoidable cost of production (and hence the average avoidable cost of an equally efficient firm). To put it another way, if the dominant firm prices above its average avoidable cost and the rival cannot profitably match that

⁶⁵ This view would appear to be consistent with that of Werden.

price, this means that the rival is less efficient and so competition authorities should not step in to allow its survival.⁶⁶

3.100 Thus, the concept of the equally efficient competitor helps to rationalise or justify the use of a suitable avoidable cost standard, but this does not make it an independent 'test' for abuse in its own right. The implication of the avoidable cost test as a benchmark for comparing the efficiency of the dominant firm and its rival may be a helpful way to *dismiss* allegations of predation. However, failing the test (ie: pricing below the relevant measure of avoidable cost) is not sufficient to show that harm to competition has occurred.

3.101 As noted above, there are legitimate reasons for pricing below avoidable cost. To find an abuse, there is no escaping from the need to identify a story of harm to competition – ie: a mechanism by which consumers end up being worse off – and show that the facts of the case support this view.

3.102 In the next section we discuss how the concept of the 'as efficient' competitor becomes more contentious when we consider situations in which a potential rival has not yet incurred the sunk costs associated with entry or has not yet obtained a scale as efficient as the incumbent's.

'Above cost exclusion'

3.103 A frequently encountered problem with the application of the equally efficient competitor test to selective price cuts is that a potential entrant

⁶⁶ Even in this case it is possible to have a monopoly outcome that is bad for consumer welfare. For example, consumer surplus and allocative efficiency could in theory sometimes be improved if competition law intervened to protect inefficient entrants (ie: inefficient competition could be better than no competition at all). We discuss this below in the context of 'above-cost exclusion' theories, noting *inter alia* that intervening could harm incentives to innovate.

has not yet incurred any sunk costs that are required to enter the market. Thus, even if the entrant would be as efficient as the rival *if it enters*, the incumbent can profitably exclude the entrant by pricing above its own avoidable cost but below that of its rival.

- 3.104 Similarly, if the incumbent operates at a more efficient scale, eg: because it produces in both its monopoly market (A) and in the market where it faces competition (B), it may be that entry at an 'equally efficient' scale is not profitable and so entry is deterred (even if the sunk cost of entry is low).
- 3.105 This leads to the notion of 'above cost' predation in the sense that the incumbent can price above its own cost and successfully exclude a potential entrant. This raises two questions: First, should the incumbent's advantage be treated as a legitimate cost advantage (and thus the entrant is simply not equally efficient)? Second, is above cost exclusion an abuse if it leads to sub-optimal outcomes for consumer welfare, even if it arises from incumbent firm behaviour that has not involved any element of short run profit sacrifice (eg: the dominant firm would have pursued a similar strategy whether or not it led to exclusion)?
- 3.106 We discuss these questions in the following sections.

Protecting inefficient competitors

- 3.107 It is possible to devise *theoretical* models which show how imposing regulatory constraints that prevent an incumbent from pricing below the new entrant's avoidable cost is good for consumers. The idea is that the incumbent's credible threat to price below the entrant's cost *if entry occurs* is sufficient to deter entry and so the incumbent never actually has to price low. Thus, the incumbent is able to charge a monopoly price, with the associated harm to consumer welfare and allocative inefficiency.
- 3.108 This proposition can be illustrated by reference to a simple example, in which the incumbent firm has a unit cost of five and charges a monopoly

price of 10. Suppose a potential entrant has a unit cost of seven (ie: is less efficient than the incumbent). It is clearly feasible for the incumbent to dissuade the entrant by a credible threat of cutting price to six if (but only if) entry occurs, but the consequence for consumers is that they will continue to suffer the monopoly price of 10.

- 3.109 Under a consumer welfare standard, and accepting the static assumptions of this simple model, one can see a possible motive for regulatory intervention to constrain the incumbent's price response to a level (say a minimum price of 8) that facilitates entry, and reduces the market price to some level between seven and 8, to the benefit of consumers. In this model, inefficient competition has been shown to be 'better than no competition at all' for consumers.⁶⁷
- 3.110 A related motivation for intervention is the kind of 'infant industry' protection that might be offered to entrants in some circumstances, where it is believed that short term protection from the full rigours of competition will enable more sustainable rivalry to be established in the longer term. It is possible to see such intervention in situations such as the industry regulators' specific duties to actively 'promote' competition in former monopoly utility sectors.⁶⁸
- 3.111 On the other hand, it is equally easy to show scenarios in which allowing the incumbent to price below its rival's avoidable costs is desirable and in which precluding the incumbent from pricing according to the

⁶⁷ Under some scenarios, such intervention might result in net gains to total welfare, if the loss to productive efficiency from encouraging inefficient entry is outweighed by the gains to allocative efficiency from moving price closer to marginal costs. See Annexe E.

⁶⁸ We also note one of the criticisms of infant industry arguments. Protectionism is a blunt instrument to encourage an infant industry to benefit from learning by doing or other economies – Porter (1990), for example, finds that exposure to international competition is more effective at driving productivity than protectionism.

avoidable costs that are within its control could be highly undesirable.⁶⁹ The main theoretical problem with intervening against 'above cost exclusion' is that rather than protecting efficient competitors it may discourage innovation and protect inefficient production.⁷⁰ To see why note the following points.

- 3.112 First, requiring a firm to accommodate a new entrant by pricing at the entrant's avoidable cost could encourage entry by inefficient firms. While this may be good for consumers if the counterfactual is *no entry at all*, consumers may suffer if a rule against 'above cost exclusion' means that the entrant finds it more profitable to enter at a 'high' cost rather than invest further and enter with a lower cost (or better) product.
- 3.113 Second, the fact that being the first in a market gives the incumbent a first mover advantage could provide an incentive to innovate or to seek out 'new' markets. 'Stripping away' first mover advantage by forcing an incumbent to accommodate inefficient entrants could deprive the dominant firm of the chance to recover its earlier investments. After all, it is not always the case that the entrant must match the costs already sunk by the incumbent before entering the market. If the incumbent has obtained its first mover advantage by a costly process of trial and error,

⁶⁹ Recall the bidding market example earlier in this chapter. In this case the threat of entry is sufficient to allow buyers to benefit – allowing the incumbent to undercut its rival is good for buyers as they obtain a lower price.

⁷⁰ A key issue is the counterfactual. Advocates of interventions which prevent incumbent firms pricing down to their avoidable costs would proceed on the grounds that 'inefficient competition may be better than no competition at all'. Advocates of a more laissez-faire approach would argue that the counterfactual of 'no competition at all' is inappropriate and hence intervention can impede future competition.

an entrant may be able to imitate the successful technology without having to spend money on unsuccessful ventures.⁷¹

- 3.114 Third, where the issue is that the new entrant is unable to reach a viable scale on account of some buyers being locked in to dealing with the dominant firm,⁷² then exclusion occurs primarily due to the factors which make it difficult for these buyers to switch. In such circumstances it may be more appropriate to investigate the factors that give rise to the switching costs, and to take action against the dominant firm only if the switching costs have arisen through anti-competitive behaviour.⁷³
- 3.115 Fourth, where the recent entrant would benefit from learning by doing or other dynamic efficiencies (and so could eventually be as efficient as the dominant firm), it may have the incentive to incur short term losses to build up an efficient scale to match or better the efficiency of the dominant firm. Alternatively, the entrant might respond to the aggressive pricing response of the incumbent by innovating to find a product offering or entry route that is viable despite the incumbent's response. Such competitive responses are a preferable route for the firm to obtain an efficient level of production than intervention by the authorities.⁷⁴ In comparison with the intervention option, they allow consumers to benefit from the low prices of the incumbent in the short term, and also

⁷¹ This is in contrast to regulated industries where a dominant firm has inherited its position from the public sector and where both the firm and its investors know that the firm is subject to a specific sector regulator, which may include facilitating growth by smaller rivals.

⁷² See the discussion of 'divide and rule' strategies above.

⁷³ *Canada Pipe* is interesting in this regard (see Annexe D). In this case the Tribunal found in favour of the defendant's discount scheme arguing that the scheme itself did not contribute to the barriers to growth that new entrants faced. Even though there were switching costs, these were not found to have arisen from anti-competitive behaviour.

⁷⁴ Note also the difficulties with intervention in dynamic industries discussed below.

generate dynamic welfare gains in the form of the product innovations that the entrant has to implement in order to work around the challenge set by the incumbent's aggressive response. This is wholly consistent with the concept of competition as a process of dynamic rivalry that ultimately benefits consumers.

- 3.116 There are also practical problems with intervention against 'above cost exclusion'. How do we operationalise the idea that the appropriate measure of cost should account for the necessary sunk costs of entering a market? How do we measure these costs so as to 'handicap' the incumbent appropriately? If the incumbent had to price at the entrant's cost level, it would probably not know these costs and hence what was a lawful price and what was not. It would be inappropriate to punish the dominant firm for pricing below a level that it could not be expected to observe.
- 3.117 There would also be scope for regulatory distortions arising from the incentive for entrants to 'game' the regulatory system. If the authorities could not observe the new entrant's costs very well, the entrant would have a strong incentive to inflate them as this would (a) make it more likely that the dominant firm is punished and/or (b) it could facilitate tacit collusion by establishing a high price that the incumbent was not permitted to undercut (for a given period of time) that could act as a focal point.
- 3.118 Finding the appropriate remedy is also difficult. Consider for example a rule proposed by Edlin (2002): '[i]f an entrant prices 20 per cent below an incumbent monopolist, the incumbent's prices will be frozen for twelve to eighteen months.'⁷⁵ The proposed rule aims at either inducing the incumbent to price low or bring new entry.

⁷⁵ Edlin notes that the analysis to determine if the trigger threshold is reached to start the price freeze should take into account the quality differentials (when they exist).

3.119 This is a good example of how difficult it is to formulate a concrete rule that is appropriate.⁷⁶ Elhauge (2003) provides a strong critique of Edlin's proposal. He argues that such rules are unworkable. First, how long the dominant firm is required to price at a high level will be arbitrary. Why should the period be 12 to 18 months but not six months or two years? Second, what happens after this period – can the dominant firm lower prices to its own avoidable cost and if so will this lead to exclusion anyway? Third, how is quality monitored? The dominant firm may not be permitted to lower price but it can increase quality instead. If the authorities prevent firms from making quality improvements, would this harm innovation? Finally, what happens if there is a cost or demand shock – does price regulation remove flexibility?

The risk of adverse precedent

3.120 The potential for adverse precedent is a further reason to be cautious when considering intervening to constrain incumbents from responding aggressively to entry or to protect inefficient entrants.

3.121 The risk of false positives (ie: a decision to intervene to prevent incumbent firm price reductions when consumer welfare would have been adequately protected by non-intervention) has to be viewed in the full context of the nature of a prohibition instrument such as Article 82 and the Chapter II prohibition.⁷⁷

⁷⁶ Any rule will make errors, so one may argue that the average performance of the rule is important. However, it is very hard to make such judgments other than to note that there are many circumstances in which the rule would not appear to be beneficial and so there is not a strong case for arguing that on average the rule prevents more harmful behaviour than beneficial behaviour.

⁷⁷ Chapter 2 discusses type I and type II errors and precedent more generally.

- 3.122 In contrast to interventions to protect inefficient competitors in regulated industries, where the special case nature of the intervention generally acknowledged and understood be *sector specific*, a decision to declare a form of pricing competition to be an abuse has clear and potentially widespread signals for other dominant or potentially dominant firms in a diverse range of industries. Thus, even where a highly interventionist stance is appropriate in one particular case, there is a risk that this precedent carries over to other areas where such intervention would be harmful.
- 3.123 Dominant (and potentially dominant) firms seek compliance advice and take heed of existing Article 82 and the Chapter II prohibition case law, and so the pricing decisions of many firms can be influenced by such rulings. Also, dominant firms often operate in industries where large sunk cost commitments dictate the likelihood of high price-cost margins and wide elements of discretion on pricing decisions.
- 3.124 A competition authority decision that sends out a signal that it is an abuse for a dominant firm not to accommodate entry, even if that entry is inefficient, could have pervasive and unintended influence. As noted above, how would the dominant firm know the costs of its rivals and thereby ensure it prices above them? The freedom of dominant and potentially dominant firms to lower prices would be seriously constrained.

Pricing above average total cost

- 3.125 One definition of 'above cost predation' is where the incumbent prices above its own average total cost and below that of its rival. However, rules based on average total cost are not useful guides to the economics of dominant firm pricing.
- 3.126 The main problem is that the concept of pricing above average total cost is undefined for firms that sell in more than one market due to the need to allocate 'common' costs. The phenomenon of common costs is likely to arise in a selective price cutting case. Because the firm sells the same

product in more than one market, there may well be overheads that are shared between the two markets. Unfortunately, there is no economically correct way to apportion these costs.⁷⁸ This means the concept of 'average total cost' for a multi product firm is not helpful as it depends on arbitrary cost allocations.⁷⁹

3.127 Appropriate manipulation or interpretation of avoidable or incremental cost concepts offer a better solution to the problems that average total cost measures are sometimes used to address. For example, where common costs exist, as Baumol (1996) has noted, combinatorial tests can be used.⁸⁰ The authorities would consider whether the incumbent covers its avoidable cost of production in market B *and* whether its operations in A and B *in aggregate* generate revenues which cover the avoidable cost of production (including any avoidable overheads).

⁷⁸ See for example, Baumol, Koehn and Willig (1987).

⁷⁹ Even in the absence of common cost problems, the measure of average total costs is affected by accounting events which change the value of total costs without affecting the economic measure of costs. For example, acquisition, re-financing of debt for equity and bankruptcy may all change the measure of average total costs even if no real change in the economics of the firm has occurred. Average total cost may also be sensitive to the output level, particularly where fixed costs are relatively high – this makes it particularly important to recognize that the relevant price for comparison is not necessarily the current price. If a long run measure such as average total cost is used, a long run measure of average revenue is also required. Of course, such issues may affect all long run notions of cost which seek to account for fixed investments such as those in plant, machinery, R&D and marketing.

⁸⁰ Baumol gives an airlines example in which a dominant airline must justify its economy fare revenue against the incremental costs of supplying economy passengers, and its business class fares against the incremental costs of supplying business passengers; however, he also notes that the combined economy and business class fares must cover the costs that could be avoided if the airline did not operate the flight at all. This latter avoidable cost measure could exceed the sum of the avoidable costs from the economy and business classes.

Inferences from pricing above cost in Bolton et al (2000)

- 3.128 Average total cost might be thought of as a *long run* measure because it seeks to include costs that are often taken as given in the short run. For example, Bolton *et al* (2000) argue that long run average incremental cost is a more economically meaningful measure of average total cost.⁸¹ They suggest that pricing above long run average incremental cost should be presumed lawful.
- 3.129 The authors also suggest that pricing above own short run average avoidable cost⁸² would (given that other screening tests are failed)⁸³ place the burden of proof on the dominant firm to provide a legitimate commercial explanation for its behaviour.
- 3.130 We would not advocate putting the burden of proof on the dominant firm where its prices are above short run average avoidable cost. Rather, we would put the burden of proof on the authorities to demonstrate that there is genuine uncertainty as to what the appropriate time period should be (and that the results of the price/cost test were sensitive to the choice of time period) and, in particular, to provide strong evidence

⁸¹ They define this to be the alleged predator's total production cost (including R&D and marketing) less what the firm's total cost would have been had it not produced the product in question, divided by the quantity of the product produced.

⁸² They define short run average avoidable cost to be the average per unit cost that the predator would have avoided during the period of below-cost pricing had it not produced the predatory increment of sales.

⁸³ These are: 'defensive price cutting' (where the price cut (to a level above own short run average avoidable cost) is a short run profit maximising response to an increase in competition) and 'market expanding efficiencies' where the price cut in the short term is justified by recoupment over longer term which arises from expanding rather than restricting output. (An output restriction would be how a monopolist would recoup losses, having forced the exit of a rival).

of likely harm to competition and consumers.⁸⁴ We discuss this further in the section below on recommendations for the analysis of above cost predation.

Conclusion on 'above cost exclusion'

3.131 We have presented a fairly long list of reasons why, in our view, above cost exclusion is not a problem that should readily be pursued using abuse of dominance rules. We summarise our recommendations on above cost predation at the end of this chapter.

Dynamic Industries

3.132 In this section we note briefly the difficulties with assessing predation in 'dynamic' industries characterized by network externalities or learning by doing.

3.133 Theory suggests that cost based tests do not perform well in such industries. In the first case, consumers' valuations depend on the size of the network and so current sales effort is an investment in increasing the valuation future consumers will have for a product or service. Similarly, in the case of learning by doing, more sales today lead to higher production which in its turn results in a faster drop in production costs; thus by pricing low, a firm is investing in more efficient production. There is no a priori reason to require that firms' prices cover such investments in short term.

3.134 In theory, predation can occur in these industries. However, it is particularly difficult to distinguish predation from pro-competitive behaviour. Cabral and Riordan (1994 and 1997) show that in industries

⁸⁴ This is not to argue that there is a large difference in our approaches. Bolton *et al*'s screening tests would go some of the way to meeting this requirement.

characterized by learning curves, predatory pricing in order to gain market share can pay off in the future since it will induce a rival to lag behind. Over time this will result in a disadvantaged rival which may not be able to compete effectively with the predator. However, they recognise that in a learning curve industry it is possible for exclusion to lead to higher consumer welfare in the end. Thus, even if the authorities could distinguish between legitimate and anti-competitive intentions, where future outcomes are uncertain it is not clear whether intervention is justified or not – attempted predation strategies may benefit consumers because they generate such strong efficiencies.⁸⁵

- 3.135 Similarly, 'but-for' standards tend to collapse in the context of dynamic industries in which competition is characterised by tipping towards a winner-takes-all outcome. In such markets there is no possible commercial motivation for competing at all unless it is to adopt strategies that make no economic sense but for achieving a monopoly position. By definition, all participants in such markets are either predators or prey.
- 3.136 The theory tends to argue against using cost base tests to determine harm to competition. Having said this where, under both short and long term measures, prices exceed avoidable cost the presumption of legality would seem reasonable.

⁸⁵ Farrell and Katz (2001) study predation when network externalities are present. In line with the conventional wisdom, they find that network effects help to create a durable advantage for a predator preventing the prey from returning to its competitive prowess post predation. However, their work reveals once again the difficulty of defining predation in such industries and points out to the ambiguity in welfare effects of successful predation under the presence of network effects.

Recommendations

3.137 This section provides two forms of recommended guidance. First, we set out our recommendations for the treatment of pricing above cost. Second, we set out the key economic principles that apply in an assessment of the foreclosure effects of selective price cuts.

Recommendations on above cost predation

3.138 By pricing above cost we mean a situation where incremental revenues exceed avoidable cost over the relevant time period and the relevant range of units. We acknowledge, as discussed above, that where this price/cost test is sensitive to the chosen time period, the test is not reliable (this might be the case in high fixed cost and low variable cost industries for example). However, where under both short and long run measures, prices exceed avoidable cost, there should be a strong presumption of legality.

3.139 Where selective price cuts occur, there should be a combinatorial test. The authorities would consider whether revenues exceed the appropriate measure of avoidable cost in market B, where the (threat of) entry occurs. The authorities would also consider whether revenues exceed the appropriate measure of avoidable costs in markets A and B together.⁸⁶

3.140 In principle, intervention might occur when a dominant firm prices above its short run avoidable cost but below long run avoidable cost (ie: that cost which an equally efficient new entrant would need to cover) where there is genuine debate as to the length of the relevant time period.

⁸⁶ When calculating avoidable cost in market B, certain costs may be taken as given because they would have been incurred to produce in market A. Thus, we need a second test to check that avoidable costs of producing in both A and B are covered.

Intervention should take place only where there is exceptionally good evidence of (likely) harm to competition.⁸⁷

- 3.141 However, in practice, to intervene in such cases may require imposing remedies that amount to price (and perhaps quality) regulation. Therefore, care would be needed to ensure that, however well intentioned, intervention is (a) backed by a workable remedy and (b) does not set a precedent which requires incumbents to hold back from competing aggressively on price in scenarios where, in the absence of intervention, entrants would have found a way to invent around the incumbent firm's challenge.
- 3.142 We acknowledge that in some cases the authorities may wish to 'manage' competition by regulating prices to remain above long run avoidable cost, so as to give a new entrant a helping hand. In some cases this may be appropriate – sectoral regulators for example have used price regulation to help introduce competition for formerly government owned monopolies.
- 3.143 However, we query whether Article 82 and the Chapter II prohibition are the appropriate instruments to *regulate* markets in this way. To take this approach would be to forget the very important distinction (noted in the earlier part of this chapter in the context of the discussion of the economic models) between competitive behaviour that could result in

⁸⁷ For example, if there were evidence that the incumbent denied the rival the opportunity to gain an efficient scale; that the rival would be equally or more efficient if it obtained that scale; and where the entry of that rival would be sustainable and most likely to lead to enhanced competition in the long term which delivers better value to consumers.

consumer detriment and actions worthy of being graded an unlawful abuse.⁸⁸

3.144 Where the authorities intervene against prices above cost, we suggest that: there should be a clear statement that the intervention is an exceptional case; the statement should 'ring fence' the precedent as much as possible to be case specific; and the imposition of financial penalties may not be appropriate for where the issue is 'above cost exclusion' (this does not rule out financial penalties where there are other anti-competitive issues⁸⁹ or where there is clear evidence anti-competitive intentions).

3.145 Where intervention is based on the 'special responsibility' of a dominant firm and where that responsibility is interpreted to mean that, even where there is no intention to harm competition, a dominant firm should refrain from certain profit maximising behaviour in order to give its rivals a helping hand, there is not a strong case for intervention, let alone financial penalties.⁹⁰

Recommendations on the economic principles and relevant evidence required to establish abusive selective price cuts

3.146 We have established above that there is no escaping from the need to identify a coherent, fact-based story of harm to competition – ie: a

⁸⁸ It is one thing to identify a theoretically possible detriment to consumer welfare, and quite another to be confident in identifying the circumstances in which such intervention serves the best long term interests of consumers.

⁸⁹ For example, where a cartel operates to exclude a new entrant with prices that are above average avoidable cost, the authorities would have scope to levy penalties for the cartel behaviour even if they did not set a fine based on above cost pricing.

⁹⁰ See the discussion of special responsibility in Chapter 2.

mechanism by which consumers end up being worse off as a result of a weakening of the rivalry between firms *and* demonstration that the facts of the case support this view.

3.147 We recommend that an assessment of selective price cutting should consider the economic principles and evidence set out below.

Facts must support a coherent theory

3.148 At the beginning of this chapter we set out various stylized scenarios in which a new entrant could be excluded (whether for good or for ill). We consider it is important to establish a theoretically sound story of how consumers are harmed for the following reasons:

- without a coherent story of harm to competition, the practice should be presumed benign – after all, competition policy seeks to encourage low prices
- a coherent story of harm guards against assuming a price cut to be harmful just because there is no obvious efficiency explanation, and
- a coherent story of harm allows us to identify the key assumptions that must be tested against the evidence. (For example, if the story of harm is that the rival is denied the opportunity to achieve an efficient scale of production, it is important to have evidence of the existence and magnitude of these claimed efficiencies).

3.149 This is not to argue that having set out a theory of harm, this theory should be set in stone. The theory may be revised as more evidence is gathered.⁹¹

Initial screens

3.150 As part of the story of harm to competition, it will usually be important (although not sufficient) to demonstrate that the entrant will suffer as a result of the pricing policy. We noted above some initial screens to identify whether an effect on a rival was feasible. These were: an (ideally independent) assessment of dominance; a consideration of alternative routes to market for the entrant that would allow entry on a viable scale; and an analysis of the effect on incentives of buyers to deal with rival suppliers (noting that there may not be one 'representative' buyer and that each type of buyer should be considered, particularly those which are the most important route to achieving scale economies or to reaching the final market).

Evidence of effect on equally efficient rivals

3.151 Having passed this initial sift more detail is necessary. We considered the extent to which cost tests would help us identify harm to a rival. We noted that cost tests are form-based analyses and so cannot alone identify harm to competition. The relevant cost test depends on the question one seeks to address. We noted that the avoidable cost test (or an appropriately defined incremental cost test) is an appealing test in

⁹¹ Bolton et al (2000) advocate a two tier approach to predation (p2264) in which the theory of harm to competition is part of the screening stage. (They propose three screening tests: (1) a facilitating market structure; (2) a scheme of predation and supporting evidence; (3) probable recoupment. The next stage is to identify (4) price below cost and (5) absence of a business justification or efficiencies defence).

predation cases for identifying whether an equally efficient rival is likely to be excluded where the rival is already in the market.

- 3.152 For selective price cuts against potential entrants, an issue is whether the rival can cover its entry costs and enter on an efficient scale. We argued that there were good theoretical and practical reasons for not intervening against 'above cost exclusion'. This leads us to favour an avoidable cost test to identify potential harm to an equally efficient rival, even if that rival has not yet entered the market.
- 3.153 Where the dominant firm's prices exceed cost on both short and long term basis, the behaviour should be viewed as lawful. Where the price/cost test is sensitive to the choice of the appropriate time period, this does not give rise to a safe harbour. However, neither does it give rise to a presumption of abusive behaviour. Other evidence (discussed in this section) would be required which clearly demonstrates (likely) harm to consumers.
- 3.154 The authorities should also consider the scope for the rival to make headway in the market by differentiating itself or making cost reductions. Even if a rival cannot match an incumbent's cost, it may be able to compete by offering a better product (ie: one that a sufficient number of consumers prefer to allow the rival to enter profitably). Such a strategy must be plausible and not just fanciful.
- 3.155 Where, after the price cut, the dominant firm loses market share or the rival enters the market and gains market share, this would be important evidence suggesting that the price cut did not harm competition. The longer the time period available, the more weight that can be given to this evidence. If an alleged exclusionary strategy has not prevented the rival from growing significantly over a reasonable length of time, this suggests that the strategy did not in fact harm competition (admittedly such evidence might not often be available when considering a potential entrant).

Is there evidence that benign commercial motivations exist?

- 3.156 In supporting a coherent story of harm to competition, we consider that the authorities should have to provide good reasons for why the pricing strategies in question are not motivated by benign commercial motivations.⁹² This section describes possible evidence which may establish such motivations and its relevance in the overall assessment.
- 3.157 Sacrifice tests and 'but for' tests are sometimes advocated as ways to identify the motivation of a dominant firm – they might ask, for example, whether there was short run sacrifice or whether the strategy adopted was profitable only due to anti-competitive behaviour. While we agree that such tests are, in principle, informative as regards a dominant firm's motivation, we note that such tests may have very demanding informational requirements and so their results would rarely be robust when applied to selective price cuts and fidelity rebates. Moreover, we noted that sacrifice tests are neither necessary nor sufficient for demonstrating an abuse; they do not avoid the need to establish a fact based story of how competition and ultimately consumers are harmed.⁹³

⁹² When assessing business intentions, we do not mean seeking to understand the state of mind of a particular decision maker. We mean an objective consideration from the point of view of a reasonable business person.

⁹³ Further, in theory, sacrifice is not necessary for exclusionary anti-competitive behaviour (for example, where it is possible to raise a rival's costs without raising own costs).

- 3.158 Sometimes the idea is put forward that meeting competition is permissible but beating competition is a sign of anti-competitive intent. We do not consider this 'test' to be helpful.⁹⁴
- 3.159 Documentary evidence may provide indication of the mechanism by which a dominant firm seeks to exclude a rival. Care should be taken when interpreting evidence to distinguish between exhortations to oust rivals which are entirely consistent with competition (after all if firms do not want to beat their rivals they may be colluding) and evidence which clearly demonstrates the threat to a dominant firm's market power and how it plans to respond to that threat in a way that harms competition and consumers.
- 3.160 Observations that firms without market power employ similar pricing practices may be informative. For example, where non dominant firms in similar industries price below a relevant measure of avoidable cost this would indicate that 'short run profit sacrifice' is not necessarily motivated by excluding a rival. Even without such evidence, it should be noted that there are many reasons why pricing below avoidable cost can be consistent with competition.⁹⁵

⁹⁴ First, it is practically very difficult to implement in a differentiated goods environment where quality differentials would make the judgment between what is 'meeting' and 'beating' very hard. On the other hand, if goods are homogenous and tough competition is expected post entry, any potential entrant will not feel more secure because firms that need to incur significant entry costs will hesitate to enter into homogenous goods markets under such a rule. Even absent sunk costs of entry, the incumbent could meet competition at a price below its own avoidable cost. Second, suppose an incumbent 'beats' a rival at a price above its own average avoidable cost – if that were outlawed this could protect inefficient rivals (as discussed in the section on above cost exclusion). Finally, such a rule may be conducive to coordinated action and as a result entry may not bring any increase in the level of competition.

⁹⁵ It does not follow that where a practice is observed only to be carried out by dominant firms that the motivation for the practice is necessarily anti-competitive.

- 3.161 Where the price cut reflects efficiency considerations (eg: an appropriate response given the need to recover fixed costs), this would be important in understanding the commercial motivation behind the practices under review. However, we would not view efficiency justifications as being measurable effects that can be traded off against anti-competitive effects.⁹⁶
- 3.162 This leads us to the relevance of the dominant firm's commercial motivation. Where there is justifiable suspicion of the dominant firm's behaviour, the burden should be on the dominant firm to provide a commercial justification for its behaviour. Pricing below avoidable cost (appropriately measured) gives rise to justifiable suspicion. However, this does not mean that a dominant firm's inability to provide a justification means that it must have behaved abusively – there would still need to be a coherent and fact based story of harm to competition.
- 3.163 Where the dominant firm can provide and substantiate an objective and credible legitimate business justification for its selective price cutting behaviour, this evidence should weigh heavily against finding an abuse – low pricing practices are generally to be encouraged.
- 3.164 This would not rule out intervention by the authorities, although this should require particularly strong evidence that the practice harms competition and consumers (see above recommendations on 'above cost exclusion').
- 3.165 Intervention in such a case would also raise the following issue. If the firm could reasonably have been expected to have followed that strategy *even absent the pursuit of harm to competition*, is it appropriate to levy

⁹⁶ This is discussed further in the chapter on fidelity rebates. We also note that Ramsey pricing is often argued as a 'justification' for a particular pricing practice. The Ramsey principle is simple – charge lower margins where demand is more elastic; this applies whether a firm is dominant or not. See Annexe E for a further discussion.

financial penalties on the firm? Instead, there could be a 'no fault' (ie: no penalty) requirement to stop the pricing conduct in cases where credible commercial justifications exist.

- 3.166 As with our discussion of 'above cost exclusion', the authorities must consider whether remedies are workable and the effect of any precedent that would arise. Where no financial penalties are imposed, this might allow the authorities to rectify the problem that they have identified while limiting (although not eliminating) any adverse precedent which would mean that dominant firms fear that they will be fined for pursuing low pricing policies that they reasonably expect to be benign.

Recouping losses and the mechanism for consumer harm

- 3.167 Ultimately an abusive practice will (be likely to) harm consumers through harming the process of competition. Therefore any direct evidence that consumers are harmed (or not) is important. For example, we noted in our bidding study example, that if exclusion of an entrant occurs, buyers may still gain from the potential threat of entry. Indeed, where buyers use the threat of sponsoring new entry to negotiate lower prices this suggests that the selective prices are not anti-competitive in that, for the threat to switch to be real, the prospect of entry must remain.⁹⁷
- 3.168 We also noted an example in an intermediate market where the incumbent used a selective price cut to its own buyers to prevent them losing share in the downstream market to buyers that switch to the new entrant. The selective price cut may thereby enhance downstream competition and thereby benefit final consumers.

⁹⁷ While we acknowledge that buyers in intermediate markets can, in theory, act strategically (perhaps in conjunction with the powerful supplier) to harm consumers, there should be no presumption that this is the case. Negotiated discounts from suppliers are common place and a presumption against them would substantially harm consumers.

- 3.169 'Before and after' evidence is helpful as well. In the (rare) cases where there are sufficient reliable data, it may be possible to estimate whether the pricing practice had an adverse effect on consumers by comparing outcomes (eg: price, quality) before and after the practice was implemented.
- 3.170 Recouping losses form part of the fact based story of harm to competition. In our view, recouping losses should *always* be considered. By this we mean that there should be a compelling explanation for why prices will go up or will remain higher than they otherwise would have done (in the long term and/or in other markets) – after all, this is how consumers are harmed (we use 'higher prices' as short hand for harm to consumers, the harmful effects include lower quality, reduced choice and slower innovation).
- 3.171 We acknowledge that an independent analysis of dominance will sometimes mean that recouping losses is feasible in predation cases where the dominant firm seeks to oust an *existing* competitor from the market in which it is dominant. However, in the case of selective price cuts against new entrants, the following points should be noted.
- 3.172 First, the fact that we are considering a response to entry (or potential entry) indicates that entry barriers are not insurmountable. An important issue will therefore be to address the extent to which the dominant firm's actions will affect entry barriers (for example by creating a reputational barrier to entry) and the likelihood of new entry in the future.
- 3.173 Second, economic theories of (harmful) exclusion are fairly well developed for incumbent *monopolists* but are not well developed for incumbent *oligopolists*. It is arguable that exclusion of an entrant is less likely (or at least less likely to harm competition) where the dominant

firm already faces some degree of existing competition, albeit imperfect.⁹⁸

Standard of proof

- 3.174 We have set out economic principles and examples of relevant evidence that must be considered when coming to an assessment of whether a selective price cut is an abuse.
- 3.175 This evidence must then be weighed in the round. Because competition policy generally seeks to encourage low prices, we argued in Chapter 2 that a high standard of proof should be met before a low pricing practice is found abusive.
- 3.176 By 'high' standard of proof we suggest that the evidence should demonstrate that harm to consumers is likely to have occurred or likely to occur in the near future. While it is never possible to weigh evidence so precisely as to be able to say 'there is a 50 per cent chance of abuse', the flavour of our recommendation is that the required probability would be far greater than 50 per cent where low price abuses are concerned.

Summary

- 3.177 The following bullets provide a high level summary of our recommendation:

- identify a coherent story of harm, consistent with facts

⁹⁸ We note *en passant* that both of the above points would seem to indicate that demonstrating a selective price cut to be abusive would be more likely when the firm under investigation is *super dominant*. First, new entry is more likely to matter as a competitive force when existing competition is (almost entirely) absent. Second, the economic theories are better developed for super dominant firms; this facilitates both identifying the theory of harm to competition and testing that theory against the facts.

- ask initial screening questions:
 - provide an (ideally independent) assessment of dominance
 - consider alternative routes to market for the entrant that would allow entry on a viable scale, and
 - analyse the effect on incentives of buyers (particularly those which are the most important route to achieving scale economies or to reaching the final market) to deal with rival suppliers
- identify likely harm to an equally efficient rival
 - robust evidence of above avoidable cost pricing should indicate lawful behaviour
 - where the relevant time period is debatable and the price/cost test sensitive to the choice of time period, further analysis is required (this might be the case in industries with high fixed costs and low variable costs and 'dynamic' industries, where cost based rules may not perform well)
 - pricing below avoidable cost gives rise to justifiable suspicion although it should not be presumed abusive without strong evidence of (likely) harm to competition and consumers, and
 - consider alternative ways for the rival to enter profitably – is product differentiation or cost reduction a credible strategy?
- establish reasonable, legitimate commercial motivations
 - the existence of substantiated objective and credible commercial justifications which are not anti-competitive should weigh heavily against finding an abuse as low pricing practices are generally to be encouraged, and
 - the absence of a clear legitimate motivation should not lead to a presumption of anti-competitive behaviour (but means that the dominant firm has missed an opportunity to tip the balance in its favour)
- examine evidence of (likely) harm to consumers

- re-affirm that the story of harm (including a consideration of recouping losses) meets the facts of the case
- weigh up the strength of evidence of (likely) harm to consumers via (likely) harm to competition – does it meet the appropriate standard?
 - since low prices are generally to be encouraged, the standard of proof should be high
- the case for intervention should take into account the prospect of workable remedies and the risk of adverse precedent
 - do remedies inevitably lead to price regulation – are remedies easily circumvented by product differentiation and quality improvements, and would regulating the latter have adverse side effects on innovation?
 - in the rare cases where a decision to intervene is taken even though the dominant firm has a good case that its motivations were benign, the authorities should consider a 'no blame / no penalty' approach and statements which ring fence adverse precedent, and
 - intervention to 'manage' competition and to give rivals a 'helping hand' is not appropriate for Article 82 / the Chapter II prohibition. The 'special responsibility' of dominant firms should not be used to justify such interventions.

4 FRAMEWORK FOR ANALYSING FIDELITY REBATES

Introduction

- 4.1 In this chapter we analyse fidelity rebates and recommend a framework for assessing their anti-competitive effects under competition law. The concern with fidelity rebates is usually that a supplier with substantial market power makes a low price conditional on exclusive (or near exclusive) purchasing, with the result that a market is foreclosed to a rival competitor. Typically, cases involving fidelity rebates concern intermediate markets. We suggest a structure in which the potential foreclosure effects of fidelity rebates might be assessed. Where possible we attempt to offer suggested safe harbours.
- 4.2 First we consider possible definitions of a fidelity rebate and describe the competition concern that usually arises in investigations of fidelity rebates.
- 4.3 Second we explain why discount schemes should generally be encouraged, provide examples of pro-competitive motivations for using fidelity rebates and describe scenarios where such motivations are most likely to apply.
- 4.4 Third, we discuss relevant theories of harm to competition and consider a theoretical link between fidelity rebates and selective price cuts.
- 4.5 Fourth, we set out initial screens that can be applied at an early stage to identify those cases where further, more detailed analysis is required.
- 4.6 Fifth, we consider more detailed evidence on possible tests for distinguishing between harm to a competitor and harm to competition.
- 4.7 Sixth, we summarise issues of below cost pricing that relate to rollback rebates (these issues are developed further in the next chapter).

- 4.8 Seventh, we discuss whether fidelity rebates should be presumed unlawful and the role of efficiencies and an 'indispensability' test in the assessment of these discount schemes.
- 4.9 Eighth, we conclude that each case must be supported not only by a theory of harm to competition but a theory that is supported by the facts of the case. This is consistent with our conclusion in the previous chapter.
- 4.10 Finally, by way of summarising the chapter, we recommend several questions to address in an investigation of alleged foreclosure resulting from fidelity rebates. These questions are then applied in a hypothetical case study where intervention might be appropriate (at the end note to this chapter) and three cases studies, *Virgin/BA*, *LePage's* and *Canada Pipe* (see Annexes B, C and D).

Definition

- 4.11 We use the terms fidelity rebate and loyalty discount interchangeably. The concern with fidelity rebates is usually that a supplier with substantial market power makes a low price conditional on exclusive (or near exclusive) purchasing, with the effect that a market is foreclosed to a rival competitor. Unlike a straightforward price cut, the lower price is conditional on reducing purchases from rival suppliers.
- 4.12 We note that the legal definition of a 'fidelity rebate' is arguably any discount that has the effect of inducing loyalty.⁹⁹ However, we consider that 'loyalty inducing' is too wide and uncertain a definition to be helpful. This is because the essence of price competition is that by lowering its price a supplier induces a customer to buy more of the brand in question, often at the expense of a rival's sales. So, a discount that is

⁹⁹ See the chapter on *Michelin II*.

quintessentially competitive could be defined a fidelity rebate because it induces the buyer to buy more from one supplier and less from another.

- 4.13 Therefore, in order to make the definition more manageable, we define a fidelity rebate to be a discount *conditional on the share of a buyer's needs taken from a supplier*.
- 4.14 While the previous chapter on selective price cutting was largely concerned with a supplier setting different prices in different markets, this chapter is concerned with offering buyers *in the same market* a menu of contracts from which they choose their preferred option.¹⁰⁰ The supplier discriminates between different buyers according to how much they buy in relation to their total needs.
- 4.15 For example, suppose buyers are offered a discount conditional on purchasing 80 per cent of their needs from a given supplier. In this case, a small buyer with needs of (say) 100 units qualifies for the discount when it purchases 80 units from the supplier. A larger buyer whose needs are (say) 1,000 units must purchase 800 units from the supplier before qualifying for the discount. The discount is not based on absolute quantities purchased but quantities purchased relative to total needs.¹⁰¹
- 4.16 The following stylised examples could be seen as fidelity rebates:
- a discount conditional on exclusive purchasing

¹⁰⁰ In standard economics terminology, this chapter is concerned with 'second degree price discrimination'.

¹⁰¹ By total needs we mean total needs of the relevant product. Thus in our example even if a buyer is large in the sense that it is a multi product producer and so buys large quantities of different inputs overall, it may be a small purchaser of the good in question.

- a discount conditional on purchasing a certain quantity of units, where the quantity target is a large share of the buyer's likely needs over the reference period
- a discount conditional on growing sales year on year (for example, last year's sales could be a proxy for the buyer's needs this year so that in effect the discount is conditional on a buyer increasing or retaining its share of needs purchased from a particular supplier), and
- a discount conditional on purchasing a certain amount of another good from the supplier.

4.17 Depending on how targets are defined, the first three examples could relate either to single product rebates (ie: discounts that relate only to one particular product) or to multi product rebates (eg: where a discount is obtained on widgets, if a certain amount of gadgets are purchased).¹⁰² The final example is a multi product rebate.

4.18 It is evident that the term 'fidelity rebate' can cover several types of discount and there is no reason to believe that these discounts are necessarily bad. This highlights an important issue in the analysis of fidelity rebates (and indeed any form of low pricing abuse). In an effects-based regime, the key to establishing harm to competition is not to assess whether the *form* of a discount is such that it can be described as 'loyalty inducing'. Instead, it is to consider whether the rebate in question has the *effect* of harming consumers through harming the process of competition. In the following sections we consider pro-competitive fidelity rebate schemes and then establish a framework for identifying anti-competitive fidelity rebate schemes.

¹⁰² This is a form of bundling. We discuss this further below.

Examples of pro-competitive fidelity rebates

- 4.19 Discounts are a form of price competition generally to be encouraged. The essential business justification for rebates is simple – selling more at prices which increase profits. A firm may be reluctant to offer a lower price on *all* sales simply because to do so would lower profits. However, where lower prices can be targeted on incremental units, this allows the supplier to sell more without harming revenues on other units sold.¹⁰³ Usually this is entirely consistent with effective competition. Whether a firm was dominant or not, this same incentive would exist.¹⁰⁴
- 4.20 The pervasive use of discounts by firms without market power demonstrates that there are several benign motives for using discount schemes, even when used by dominant firms. Some examples which apply to fidelity rebates are set out below. We describe examples of manufacturers dealing with retailers. However, the principles apply more generally.

Providing an appropriate reward for the efforts of downstream firms to promote the dominant firm's products

- 4.21 Market share rebates and growth rebates may be used (along with several other discount schemes) as a mechanism to align a retailer's incentives with the manufacturer's incentives when monitoring a retailer's behaviour is costly.

¹⁰³ This argument does not apply so well in the case of rollback rebates. Efficiency considerations for rollback rebates are discussed in Chapter 5.

¹⁰⁴ Where firms must recover substantial fixed costs, such non-linear pricing schemes may be essential for effective competition.

- 4.22 In industries where retailers add substantial value to the manufacturer's product by providing additional complementary services (such as providing information or promotional effort), there may be a 'principal-agent' issue where the manufacturer (the principal) benefits from the 'effort' exerted by the retailer (the agent).
- 4.23 Where providing effort is costly for the retailer, the manufacturer must provide the appropriate incentives for retail effort. In theory, the manufacturer could write a contract which specifies the required effort. However, in practice, this might be difficult for several reasons. These include: monitoring the retailer, verifying to a third party (eg: a court) that the retailer has breached the contract, and specifying the necessary service for each possible state of demand (in particular where retailers themselves are in a better position than the manufacturer to judge the correct combination of services to expand demand).
- 4.24 Rather than go to the trouble of writing a very detailed contract, a growth rebate could provide an effective way to align the retailer's incentives with that of the manufacturer. Greater effort should translate into greater sales and so the manufacturer rewards the retailer for beating sales targets based on last year's sales.¹⁰⁵
- 4.25 As regards discounts which are specifically (and not just implicitly) conditional on the supplier's share of a retailer's needs, these may be a good proxy for the effort exerted by the retailer in promoting the product, for example where this 'controls' for fluctuations in demand which affect the retailer but cannot be observed by the manufacturer.

¹⁰⁵ As noted in OFT (2002), the supplier might use a simple adaptive model whereby if the retailer's sales this year exceed last year's sales the retailer receives, by means of a rebate, some of the extra profit that its sales have generated for the supplier. Alternatively, a supplier that deals with many retailers might set a purchase target based on a different, but similar, retailer's sales in the previous period – analogous to 'yardstick' competition.

Lowering input costs for downstream buyers and thereby encouraging them to compete more effectively on price

- 4.26 Fidelity rebates might be particularly well suited to lowering input costs for downstream firms of *different sizes* and thereby encouraging them to compete more effectively on price. Share of needs rebates (unlike volume discounts) allow small buyers to obtain similar discounts to large buyers. Thus, when offered by suppliers to intermediate markets, these rebates might encourage downstream competition which, in turn, should mean that the discounts are passed on substantially to consumers.
- 4.27 This situation is most likely to apply when the input constitutes a large share of the downstream firm's marginal cost *and* where small firms (ie: smaller buyers in the procurement market) are an important competitive constraint on larger firms in the downstream market.
- 4.28 This may beg the question – why not simply offer both smaller and larger firms the same (or a similar) low price without conditions? In general, 'non-linear' pricing (ie: offering a pricing schedule where the price is conditional on, *inter alia*, the number or share of units purchased) is an effective way to offer lower prices at the margin while earning higher prices on 'infra marginal' units. This incentive exists whether or not a firm has market power. Moreover, non-linear pricing may be essential for a firm's viability when there are significant fixed costs to recover.
- 4.29 This does not necessarily mean that the appropriate form of non-linear pricing is to set a discount based on the share of a buyer's needs. However, where such discounts target incentives more effectively than

other types of discount (as discussed in this sub-section), it helps explain why unconditional price cuts are not appropriate.¹⁰⁶

Reflecting cost based efficiency or providing an appropriate environment for investment

- 4.30 In some instances a supplier may use fidelity rebates to benefit from efficiencies. For example, a manufacturer that benefits from a learning curve as it produces more or whose production process involves economies of scale might well offer discount schemes that give its retailers incentives to purchase more in anticipation of the fact that demand expansion will lower its average costs.¹⁰⁷
- 4.31 This begs the question of whether quantity based schemes would be better to achieve these economies. Intuitively, we would expect that discounts based on a share of the buyer's needs would be more likely to be found where demand is not stable or predictable and/or subject to retailer specific shocks or agency problems. In these cases, rather than

¹⁰⁶ OECD (2003) noted: 'An example of a unique procompetitive benefit of fidelity discounts can be found in Finland's Kenkä-Kesko case where they were used to encourage a group of different sized distributors to increase their purchases of a private brand of footwear. Without the resulting overall increase in sales, it would not have been possible to introduce Kenkä-Kesko's new private brand; ie: the foreign supplier's price would have been too high. A single schedule quantity discount offered to all Kenkä-Kesko distributors might have given smaller distributors an insufficient incentive to help meet the minimum overall sales threshold of private label footwear. This problem was overcome through the use of fidelity discounts and the result was an improvement in inter-brand competition.'

¹⁰⁷ For example, lower costs may arise where having a continuous and foreseeable order flow is important for the manufacturing process because it is very costly to stop production (or substantially reduce production) and then re-start (or substantially increase) production.

setting a discount based on an absolute target, a *relative* target may perform better.¹⁰⁸

- 4.32 The pursuit of unit cost reductions through greater volume is by no means the only, or even the major, efficiency motivation for offering fidelity rebates. As noted above, an extreme form of fidelity rebate is a discount based on exclusivity. The economics literature has established several possible efficiencies that may arise from exclusive dealing that relate to the effective recovery of customer-specific investments and the avoidance of market failures such as free rider or hold-up problems.¹⁰⁹
- 4.33 Intuitively, we would expect that relaxing the exclusivity conditions a little would only affect the investment incentives a little. Therefore, in situations where the retailer values stocking the product of a rival manufacturer (eg: because products are differentiated or because the buyer wants to stock small quantities of a rival's product to maintain its buyer power),¹¹⁰ a discount based on near exclusivity would seem an appropriate way to provide appropriate investment incentives, while allowing rival suppliers to be stocked.

¹⁰⁸ A share of needs rebate may be well suited where there are customer specific cost savings as purchases increase from a given supplier. For example, suppose there is a fixed delivery cost per buyer. As that buyer takes a higher share of its needs from a supplier, the supplier's average cost of dealing with that particular buyer declines.

¹⁰⁹ There is no consensus as to whether discounts conditional on exclusivity are generally pro-competitive or generally anti-competitive. In OFT Research Paper 12 (1996), for example, a case by case approach is recommended.

¹¹⁰ For example, if by stocking a rival's product the buyer is able to monitor that rival's quality, this may make the buyer's threat to switch to making the rival the main supplier more credible.

Maximisation of customer bargaining power

- 4.34 It is important to recognise that many transactions in imperfectly competitive markets involve important elements of bilateral bargaining between active parties on the demand and supply sides. Some practices which appear as fidelity rebates have their competitive explanations in the commercial motivations of the customer rather than the supplier.
- 4.35 For example, the classic exercise of a buyer's bargaining power might come through the buyer's decision to auction the right to be its supplier through a bidding process in which the lowest price (or most advantageous offer) wins the customer's business. Such a process manifests itself in the winning bidder having granted preferential terms in return for securing exclusivity from the customer, an outcome that can be hard to distinguish from a fidelity discount in return for exclusivity. Clearly, however, competition authorities should be careful not to confuse the successful exercise of buyer power with uses of exclusivity discounts that arise from unilateral exercise of seller market power.¹¹¹

111 Marx and Shaffer (2004) (henceforth MS) provide an interesting take on how market-share discounts may constitute an effective tool for rent shifting. MS point out that such discounts can serve as a means of rent extraction from rival firms and that effective rent extraction requires that the rival firm is not excluded. (This is because the dominant supplier wants to extract the profit that its buyer obtains when dealing with another supplier. Market share discounts allow the supplier to contract on how much of a rival supplier's output is purchased by a buyer. This is important where this improves the buyer's bargaining position with a second seller.) If such discounts are forbidden, firms would look for alternative ways to achieve similar results. Ironically, one such way would be excluding rivals from the market, exactly what antitrust challenge against market-share discounts aims to prevent. Furthermore, when used for such rent-shifting purposes, market-share discounts have only distributional effects and do not create any harm to welfare. The discount is not used to exacerbate market power which suggests that a per se prohibition of market-share discounts is inappropriate and might lead to adverse effects in markets (because rent-shifting would occur, but by less efficient means). One should note that when market-share discounts are used in this manner below cost pricing occurs only out of the equilibrium path. In other words, the highly discounted prices appear in a contract just for the buyer to be able to obtain better terms from another seller, they are not expected to become operational.

Theories of harm to competition

- 4.36 The economics literature is not yet well developed as regards the analysis of discounts conditional on a share of a buyer's needs.¹¹² Nevertheless, the principles discussed in the previous chapter carry over to the analysis of fidelity rebates.
- 4.37 Thus, sunk entry costs, economies of scale in production and network effects can create the conditions under which pricing behaviour can deter new entry or raise barriers to growth for a rival already in the market (in the latter case, harm to competition might arise without there being elimination of the rival).
- 4.38 A potentially important difference, however, is that where a rival is already *in* the market (as would usually be the case in a fidelity rebate investigation) the rival may have already sunk costs of entry. This

¹¹² Some recent papers on market share discounts include Mills (2004), Nalebuff (2004), Greenlee, Reitman and Sibley (2004) and Marx and Shaffer (2004, discussed in the previous note). Mills (2004) explores the effects of market share discounts in a vertical market structure that includes opportunities for schemes both to increase efficiency by inducing downstream services and to exclude rivals. The analysis suggests that although market share discounts boost the sales of the manufacturer's brand through merchandising activity by incentivised retailers, rival brands are generally not excluded from the market (when objectives are benign). Mills finds that a prohibition of market share discounts would diminish market performance. In addition, in independent studies, Nalebuff (2004) and Greenlee, Reitman and Sibley (2004) show that the monopolist of one good can bribe the customers to buy their competitive good needs at a premium by offering the 'must stock' good at a discount from the monopoly price if they also source their needs of the competitive good from the monopolist. These studies show that the Chicago critique that bundling would not be profitable when the second good is supplied competitively does not apply when each customer has a downward sloping demand for the monopoly good and there is no fixed ratio of consumption for the two goods. The monopolist's strategy is profitable because it can offer a discount on the monopoly price at little cost to itself (a second order loss in profits) while offering consumers a first order gain in utility. This means that consumers are willing to pay more for the monopolist's competitive product. It may even allow the monopolist to foreclose a more efficient producer in the competitive market.

removes a key source of first mover advantage on which many foreclosure theories rely.¹¹³

4.39 Foreclosure is less likely when the dominant firm's rival produces a differentiated good (ie: a product that at least some consumers would value more than the incumbent's good if both are priced at the same level). Economic theories of foreclosure are better developed for what might be deemed 'super dominant' firms. Foreclosure theories would appear to be less well developed (and hence less robust) in situations where dominant firms face some, albeit not fully effective, competition.¹¹⁴

4.40 Economic models often aim to demonstrate how a certain pricing practice may lead to a 'sub-optimal' outcome compared to a welfare benchmark. We should not infer from the economic theory that every outcome which generates exit, or even every outcome that is sub-optimal for consumer welfare, must be rooted in an abuse.

¹¹³ Much of the literature discussed in the previous chapter relates directly to discounts conditional on exclusivity which exclude a rival. Where the rival has to wait until a later period before it offers contracts to buyer, its inability to react earlier is key to its exclusion. Where suppliers offer contracts simultaneously, foreclosure seems most likely to occur as a result of a coordination failure. This may occur where the dominant supplier makes use of some other advantage (eg: cost) to employ a 'divide and rule strategy' to deny a rival an efficient scale or the opportunity to benefit from learning by doing (see previous chapter).

¹¹⁴ Foreclosure is not the only way to harm competition. Competition dampening (not considered in this report) is another possibility. On exclusive dealing, see for example Lin (1990) who uses the insight of Bonnanno and Vickers (1988) to show that when competing manufacturers choose vertical separation from their retailers (in his model a combination of exclusive dealing and exclusive territories), this can reduce 'perceived elasticities' of demand and dampen competition compared to the situation where both manufacturers sell through a single retailer. O'Brien and Shaffer (1993) note the restrictive conditions in which Lin's result holds and show that exclusive dealing can increase welfare. On bundling theories of competition dampening, see for example Carbajo, De Meza and Seidman (1990), where a commitment to bundling can induce a rival to differentiate itself to avoid head on competition.

4.41 However, we can take *economic principles* from these models to establish a framework in which fidelity rebate cases can be addressed. Thus we can use economic theory to help gather the data and present it in a coherent way. This is the subject of the rest of this section.

A theoretical link between fidelity rebates and selective price cuts

4.42 In our chapter on selective price cuts, we described theories of exclusion (both benign and harmful) which might apply where a dominant firm sells widgets in markets A (where it is dominant) and B (where it faces the threat of entry) and lowers (or credibly threatens to lower) prices in market B.

4.43 As a matter of theory, it is worth noting the following link between the analysis of selective price cuts and a *stylized* case of fidelity rebates.

4.44 Consider the diagram below.¹¹⁵ The horizontal axis represents the share of a buyer's needs. Up to a point (here, 60 per cent of the buyer's needs), the buyer has a very high willingness to pay for the dominant firm's good and a very low willingness to pay for the rival good (assume the latter is zero). This can be thought as an 'assured base of sales'.¹¹⁶ The height of the box is the buyer's maximum willingness to pay for the dominant firm's good (we have assumed that maximum willingness to pay in this range is £20).

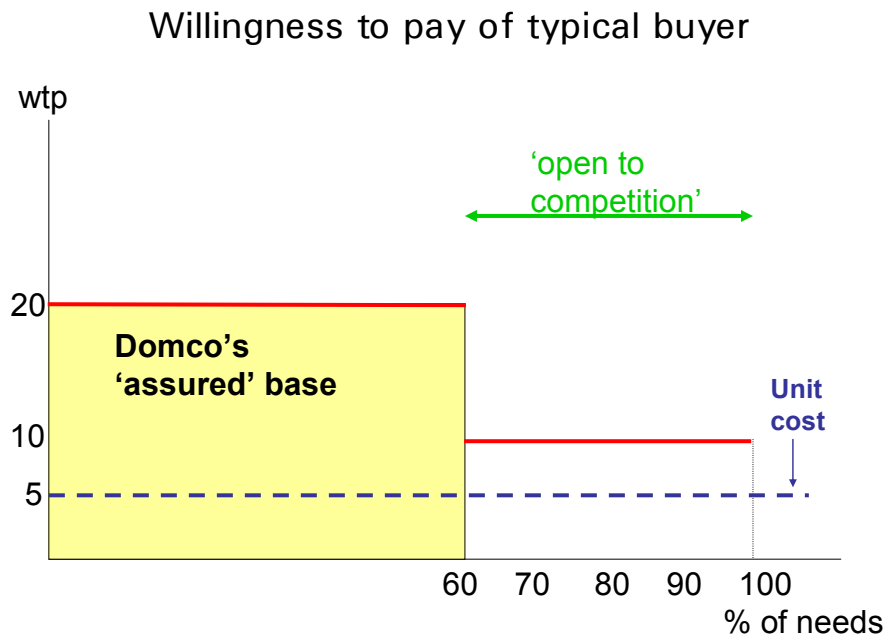
4.45 Thereafter, assume that the buyer's willingness to pay for both goods is equal at £10. Suppose both suppliers have a unit cost of £5 and their

¹¹⁵ This is taken from Bloom and Majumdar (2003), lecture 3, 'Fidelity rebates and mixed bundling'.

¹¹⁶ The term 'assured base of sales' was used in OFT (2002). See below for a discussion of how it might be identified.

products are perceived to be identical over the range open to competition. Assume too that there are no fixed costs of production.

Chart 4.1: Willingness to pay of typical buyer



- 4.46 Consider a dominant firm, 'Domco', which offers a rebate based on the share of a buyer's needs. Assume that Domco sets a list price of £20 and then offers a rebate on all units purchased above 60 per cent of a buyer's needs. In effect, the dominant firm sets a price of £20 for the units over which it has market power and a lower, discounted price on the range open to competition.
- 4.47 If Domco chooses the discount at 50 per cent then it simply prices to consumer's maximum willingness to pay. Although the discount appears very large (50 per cent), the discounted price (£10) is still above cost. The rival could profitably undercut and enter the market.
- 4.48 If Domco chooses the discount at 80 per cent then all those units open to competition are priced at £4, ie: below an equally efficient rival's cost. If the dominant firm supplied all of the buyer's needs, it makes a

profit. For example if the buyer purchases 100 units, total cost is £500 and total revenues £1,360. So for the deal as a whole, price is substantially above cost. However, to focus on all sales would miss the point that below cost prices have been targeted on the range open to competition.¹¹⁷

Implications

- 4.49 Although (as we discuss below) an assured base of sales may be very difficult to measure in practice and will differ across customer types, this stylised framework is nevertheless a useful starting point for clarifying thoughts.
- 4.50 First, it demonstrates a link between the analysis of selective price cuts and fidelity rebates (at least in some stylised cases). We can think of the 'assured base of sales' and 'range of sales open to competition' as directly analogous to 'market A' and 'market B' in our selective price cutting examples. A fidelity rebate can, in principle, be used to target a lower price on a range of sales open to competition in the same way that a dominant firm can selectively lower prices in market B (where it faces entry) but leave prices high in market A (where it is a monopolist).¹¹⁸

¹¹⁷ Rivals may have their own 'assured base' as well (this would not be part of the 'range open to competition'). Where a rival already deals with the buyer, we might present the rival's assured base of sales as a box on the diagram as well. For example, suppose that the rival is assured of selling 10 per cent of the buyer's needs at, say, £20. We could insert this box on the x axis at 90 per cent to 100 per cent of the buyer's needs. This 'visual aid' would set out clearly that it is only the remaining 30 per cent of sales that are 'open to competition'.

¹¹⁸ There is also a link to the tying and bundling literature. We can think of the discount on the range open to competition as being conditional on the pre-purchase of the assured base.

- 4.51 Second, below we will discuss the issue of 'allocating discounts'. In the above stylised example, even though the overall scheme covered its avoidable costs, we allocated discounts to the range open to competition. At times, safe harbours can be devised which assume that: (a) an *overly large* assured base of sales exists; (b) sales could be made at the list price for that assured base; (c) the appropriate measure of cost is not sensitive to the choice of the assured base. With these assumptions, we can allocate the whole of a discount to our assumed range of sales open to competition (and in effect 'over-allocate' the discount). If we are confident that we have over-allocated a discount to that range and the implied price *exceeds* the appropriate measure of cost, this will typically suggest that the discount scheme is not abusive (given that the scheme as a whole covers its avoidable costs).
- 4.52 Third, it follows that much of the high level analysis of selective price cuts carries over, with appropriate modifications, to the analysis of foreclosure effects of fidelity rebates. For example, the initial screens for analysing foreclosure are similar.

Identifying an assured base of sales

- 4.53 An assured base may arise from the following factors:
- *switching costs*, eg: where buyers are locked-in to purchasing a certain amount each period or face (perceived or real) costs of switching to a rival product. An assured base of sale may arise in an after market. For example, having purchased a printer that is compatible only with specific cartridges, a buyer with a particular printing requirement would be locked in to purchasing a given number of cartridges (provided that the price of cartridges was not so high that the buyer was better off purchasing a different printer whose cartridges were cheaper).
 - a '*must-have*' brand. A 'must-have' good could be an essential input for production. For example, where a manufacturer has obligations to meet certain contracts, it will be dependent on obtaining a given

amount of the input to meet those obligations. 'Must have' goods are sometimes discussed in relation to retailers, eg: where retailers need to stock a certain brand to be seen as credible (eg: allowing them to offer the 'full range') or because they bring in extra footfall. This may give rise to a minimum requirement, eg: because the retailer would not wish to alienate customers by having run out of stock. A further example is where a certain group of final consumers have a very strong preference for a particular brand. Where the retailer can identify these consumers, its derived demand for the product would be highly inelastic over the range of units required to meet the demand from this group of customers.

- other forms of *strong product differentiation*, eg: where there are clearly defined groups with distinct preferences (although this might be rare in practice).¹¹⁹
- *capacity constraints*, eg: where even if rivals operate at full capacity, the dominant firm is assured of making a certain number of sales.

4.54 In short, the assured base relevant to this test is the range of sales over which a dominant supplier clearly has market power. (Note however that while the assured base *for the dominant firm* is related to its

¹¹⁹ It is particularly difficult to identify an assured base of sales when product differentiation is the driver of differences in consumer preferences for the dominant firm's good and its rival. This is because unless there are very distinct types of consumer groups (where each distinct group has similar preferences within the group), there will be no clear cut off between which sales are assured at supra competitive prices and which sales are not.

dominance,¹²⁰ the existence of an assured base does not imply dominance. A firm that is not dominant could still have a captive base – however, that firm would not be in a position to leverage from that base in an anti-competitive way).

- 4.55 It may be possible to identify an assured base by data from previous years. For example, suppose a buyer regularly purchases 80 per cent of its needs from a dominant supplier at the list price, which has been stable for a number of years. In the following year, if key variables remain unchanged (in particular assuming that demand is stable and the price and quality of competitor products remain the same), this might suggest that the dominant firm could reasonably expect to sell a similar amount at a similar price.
- 4.56 Survey evidence may also be informative. For example, buyers might be asked to identify whether they typically require a minimum amount of a certain good, what their maximum willingness to pay would be to secure that amount, and what factors specifically give rise to this particular need.
- 4.57 The assured base of sales can be contrasted with the range open to competition. This would comprise purchases from:
- buyers who would not purchase from the dominant firm at all if the rival offers a better 'value' (ie: a better price-quality combination), and

¹²⁰ Many of the factors that give a firm dominance could allow the firm to rely on making at least some sales even if it prices above competitive levels. We should make a distinction between efficiency based advantages (such as offering a superior product or having a lower cost of production) that may give rise to an assured base of sales simply through offering a better value for money product and those other advantages *not based on efficiency*, which provide a dominant firm with assured base of sales.

- buyers who would always purchase some units from the dominant firm at supra competitive prices but who, after a point, would buy from a rival so long as it offered better 'value'.

4.58 Where a dominant firm can price discriminate, it will usually charge higher prices to its 'assured' or 'locked in' base and lower prices on the range open to competition. Such targeted low prices could be beneficial or they could have the effect of protecting or enhancing market power. This raises the question: when are such prices more likely to harm competition? We discuss this issue in the remainder of this chapter.

Initial screens for dismissing anti-competitive effects

4.59 We now turn to some initial screens that may be useful to dismiss cases at an early stage because there is unlikely to be harm to competition. The screens are similar to those discussed in the corresponding section in the chapter on selective price cuts, since our proposed framework is a fairly general one that can be applied (appropriately modified) to many allegations of foreclosure.

4.60 To keep the analysis clear, we discuss a stylized situation where there is a dominant manufacturer that offers fidelity rebates to its retailers which are alleged to have foreclosed a rival manufacturer to the market. We assume that the rival manufacturer is already in the market to be consistent with our case studies (although the framework applies equally well if the rival is a potential entrant).

Assessment of market power

4.61 Market power is the initial screen. If the firm offering the fidelity rebate does not have market power, its pricing practices will not harm competition. Most of our discussion takes dominance (ie: substantial market power) as having already been established (ideally by an independent analysis).

Alternative routes to market sufficient to become a viable competitor

- 4.62 Foreclosure relates to a market and not to any particular customer. Thus, even if a dominant firm's rebate scheme is targeted at certain buyers to induce them not to deal with a rival supplier, it is still important to consider how important a barrier to expansion or entry that creates, and whether a rival could make headway by selling to other buyers.
- 4.63 In addition, in intermediate markets, the rival may be able to 'forward integrate' (ie: establish its own downstream operations to avoid the need for selling to pre-existing buyers) if entry barriers to the downstream market are low.
- 4.64 The rival may even be in a position to miss out the intermediate stage and sell directly to final consumers. This would be more likely where there are large, sophisticated end users, or when economies of scope or density in distribution are relatively small, or where the intermediate stage adds little extra value to the product.¹²¹

¹²¹ If there are economies of scope, it is more cost efficient to distribute several different products together than to distribute them separately. Where there are economies of density, average costs fall the more clustered are deliveries. Both factors may mean that specialist distributors are required, meaning that it is costly to 'miss out' the intermediate stage and supply direct. In addition, where the intermediate stage adds substantial value (eg: through product promotion), it may also be costly to miss out that stage and supply direct.

4.65 Overall, there should be scope for the rival to access the market on a scale sufficient to be a viable competitor.¹²²

Effect on buyers' incentives to deal with the rival

4.66 We have argued above for an effects-based analysis of abuse. Therefore it is usually important (although not sufficient) to demonstrate that the

¹²² These issues arose in the US case, *Dentsply*. This case related to the sale of prefabricated artificial teeth in the US. Dentsply was the leading manufacturer of such teeth and had a 75 per cent-80 per cent share of sales. The end consumers for the purposes of the case were laboratories. They bought artificial teeth either directly from manufacturers or, far more commonly, from dealers. Dealers maintained inventories of artificial teeth and carried thousands of other related products acting as a 'one-stop shop' for laboratories. Dentsply prevented its 23 dealers from stocking its rival's artificial teeth (with the exception of some dealers that had grandfathered rights for sales of competing products). This was despite some requests by dealers to stock the products of rivals. A District Court found these practices not to be anti-competitive because there were alternative routes to market – ie: the many other dealers and direct sales to laboratories. This finding was over-turned on appeal. The 3rd Circuit Court found that dealers were the 'gate-keeper' to the market. This supported the view of the US government (Precedential, No. 03-4097) which argued that Dentsply controlled the key distribution points and had added distribution points to block the growth of rivals. The theory of harm was that non-Dentsply dealers and direct sales were not viable alternatives. First, other dealers were unable to sell Dentsply products. These dealers were therefore less effective routes to market for rivals, as all laboratories would want Dentsply products and laboratories typically preferred dealing with only one supplier. Dentsply's dealers were also argued to have a historic relationship with laboratories. Second, as regards direct sales, the US government argued that these were not a viable alternative for similar reasons – in particular the inability for manufacturers to offer a 'one-stop shop'. To back up this view, the US government noted that manufacturers which had specialised in direct sales had not been able to expand their sales beyond a five per cent market share. Dentsply was unable to offer a business motivation for its conduct – not even the District Court had identified a pro-competitive objective. Further, there was no clear difference between how Dentsply treated dealers with grandfather rights and those without such rights. This suggested that whatever efficiencies existed could be obtained by distributing products of rival suppliers. Finally, even the District Court found that Dentsply had a reputation for aggressive price increases and experts for both parties testified that ending the exclusive dealing provisions would lower prices.

dominant firm's rival(s) will suffer as a result of the fidelity rebate scheme in question.

- 4.67 Thus, if the scheme is unlikely to have a marked effect on buyers' incentives to deal with the rival, the case can be dismissed at an early stage. Below we consider some potentially helpful steps and questions to identify incentives created by fidelity discounts.
- 4.68 First, identify the possible discounts that can be obtained. Is the size of the discount so small that the scheme is unlikely to affect the behaviour of the buyers in question? For example, if the authorities had no issue with the list price and the discount off the list price is one per cent, there is far less likely to be a cause for concern than if the discount was, say, 20 per cent. Sometimes the size of the total rebate relative to a rival's sales is informative – where this is a small percentage, this means it is more likely that a rival could match the discount.
- 4.69 Often there will not be one 'representative' buyer. Where buyers are different, it is important to take into account how the fidelity rebate may have a different impact on different types of buyers. For example, where targets are not customised, they may have a weaker impact on incentives because they cannot be adapted for the specific case of each buyer.
- 4.70 Further, it is important to identify which buyers are most likely to be affected – are they the important routes to market? Does denying access to these buyers affect the ability of a rival to operate efficiently?
- 4.71 With incremental rebate schemes (ie: where the discount applies only to units purchased beyond a target) which relate to a single product, the discount should be fairly easy to ascertain. However, with rollback rebates (where the discount applies on all units bought once a target is reached) and with bundled rebates (eg: where purchases of widgets affect the discounts available on gadgets) establishing the discount can be more difficult (see the following chapter for a detailed discussion of rollback rebates).

- 4.72 Second, identify the most profitable route to meeting the targets. Is the share of sales required to obtain the discount so high relative to the 'usual' share, that the scheme is unlikely to affect the behaviour of the buyers in question because obtaining the discount is not feasible? The next sub section explains this in more detail.
- 4.73 It should also be noted that sometimes the target required is so low compared to a buyer's historical sales that the rebate may create exactly the same incentives as a straightforward price cut.¹²³

Incentive effects of discounts and appropriate allocations

- 4.74 In this section we explore the incentives created by a fidelity rebate in more detail as well as the implication for how to allocate the discount. When offered a discount in return for achieving a given target, the buyer will naturally consider whether it is worth trying to reach the target: do the lower prices obtained adequately compensate the buyer for moving away from what would otherwise be a profit maximising position?
- 4.75 The incentive will be stronger the greater reward on achieving the target and the lower the costs of meeting the target. When making this assessment, it is helpful to address the scope for the buyer to obtain the discount through:
- natural demand growth: will natural growth in the buyer's market mean that the qualifying threshold for the discount is easy to obtain? (eg: this might be important in the case of a growth target),¹²⁴

¹²³ Sometimes when optimal short-term behavior of a firm involves a price cut, the firm prefers to achieve this by a discount rather than lowering its list price because a list price reduction might have more influence on future periods. That is, in a future period where optimality requires raising back the price, ending the discount might be much easier than raising the list price. A rollback rebate could be used to achieve a price cut in this way.

- greater promotional effort: how easy is it to meet the target by increased buyer efforts to grow demand for the supplier's product? If the product is such that a given buyer has wide discretion on how many units of the product it may sell in the relevant period (eg: it can achieve a high sales uplift for that product by featuring it in a promotional display), then achieving that target is less likely to displace sales of the rival brand. But if such discretion is very limited, such that the buyer's sales of the product category take the form of a 'zero sum game', the achievement of the target will be more closely linked to harm to the rival, and
- direct substitution of the rival's product for the dominant firm's product: how easy is it for buyers to replace purchases from the rival with purchases from the dominant firm? This will be harder the more differentiated are the manufacturers' products.

- 4.76 Consider a stylised example based on our *LePage's* case study (see Annexe C). Suppose that Domco produces six products A, B, C, D, E and F. Buyers are offered a discount if they grow total purchases by 12 per cent and achieve at least \$1 growth in two product lines.
- 4.77 We assume that obtaining a \$1 increase in sales on two of the six lines is straightforward (say products A and F), eg: because the buyer can replicate last period's sales effort on product lines for which demand is stable.
- 4.78 In this case, we need to consider the easiest way for buyers to achieve the 12 per cent growth on total revenues (ie: a 12 per cent increase

¹²⁴ Where demand growth is uncertain, this affects the expected discount. The effect of uncertainty on discount schemes (in particular 'stochastic demand') is discussed further in the next chapter in relation to the reference period and in relation to 'fairness'.

aggregated across *all* lines but not necessarily a 12 per cent increase on each line).

- 4.79 Suppose that the concern relates to product line B: a rival produces an identical B product and has complained that bundled rebates are foreclosing the B market.
- 4.80 If achieving 12 per cent overall sales growth requires substantial growth in product line B then it may be reasonable to argue that the discount is targeted at product B. This could be because significant growth in other product lines is very hard to achieve or because these other lines do not account for a substantial share of overall revenues. If Domco knows this, it is *as if* Domco has an assured base of sales (eg: it knows that it will usually sell more or less the same amount each year at the list price on other lines) and has then targeted its discount on product line B, the only line for which the buyer has scope to grow demand.¹²⁵
- 4.81 Given our assumption that the rival's B product is identical to the dominant firm's B product, a fairly easy option to grow sales is to replace purchases from the rival with purchases from Domco. (If the rival's product was differentiated, this might not be feasible – perhaps because the buyer's customers in the downstream market have strong preferences for the rival's product).
- 4.82 Now consider a different scenario. Suppose that 12 per cent growth can be achieved only by substantial sales in product lines B, C and D. In this case the discount would seem to be targeted across all three lines. It is not clear how we should allocate the discount in this case. However, allocating the whole discount to product line B is an over-allocation. Thus, if the implied price of B after allocating the whole discount

¹²⁵ We may need to make assumptions about sales made on other product lines where these affect the level of the discount as well. We provide an example below.

exceeds an appropriate measure of cost, this suggests that the discount is not anti-competitive (given that, overall, revenues from the scheme exceed the avoidable costs of running the scheme). We discuss this further below.

Identifying harm to competition from harm to competitors

4.83 Having failed to dismiss the case at the initial screens, we face the difficult question of whether the fidelity rebate in question:

(a) harms the entrant but does not harm final consumers, or

(b) ultimately harms consumers by weakening the process of competition.

4.84 In this section we discuss possible ways to distinguish between case (a) and case (b) above. At times we draw on principles in the economics literature that have been used to analyse predatory pricing – these were discussed in the chapter on selective price cuts and are not repeated here.

- 4.85 We focus on the following issues. First, with identical products, Domco simply has to beat its rival's price for exclusion to occur (absent switching costs which lock the buyer in to some purchases from the rival). This is the essence of competition and so there would be no cause for concern provided the discounted price exceeds the appropriate measure of cost.¹²⁶
- 4.86 Second, with differentiated products, the rival may not need to match Domco's discount entirely to compete because where some of its customers have strong preferences for the rival's good they are willing to pay a 'premium'. Moreover, the rival may be able to respond not only by lowering its price but by improving its product further.
- 4.87 Third, with bundled discounts, it is important to consider the extent to which Domco faces competition on the other products that make up the bundle.

¹²⁶ As noted in the previous chapter, while it is reasonable to query why a dominant firm would price below cost, there are several legitimate competitive reasons for so doing. US case law indicates that for single product rebates pricing above cost is lawful – even where the issue is a fidelity rebate. For example, in *Concord Boat v. Brunswick* (207 F.3d 1039, (8th Cir. 2000)) the Eighth Circuit held that Brunswick, a manufacturer of boat motors, did not monopolize the market for inboard and stern driven boat motors by giving boat builders discounts pegged to their purchases of minimum percentages of their requirements. Brunswick offered discounts of approximately three per cent off the price to boat builders who purchased at least 70 per cent of their motor needs from Brunswick. It also gave an additional one per cent or two per cent discount to builders that agreed to maintain those shares for two or three years. While the discounted prices were above Brunswick's cost, the plaintiffs, a group of boat dealers, claimed that the market share discounts had allowed Brunswick to dominate the market. The Eighth Circuit held that Brunswick's above-cost market share discounts did not violate the antitrust laws (the Court noted bundled rebates might not enjoy such a strong presumption of legality).

Does the discount lead to below cost pricing?

- 4.88 A helpful question is whether the discounted price is below an appropriate measure of cost. If not, this suggests that the discount is a form of price competition and that an equally efficient rival could match the discounted price.
- 4.89 There are two issues. First, is the whole scheme itself profitable? To assess this question, the appropriate test is to consider whether average revenues exceed a robust measure of average avoidable costs over the relevant time period (our preference for an avoidable cost test is discussed in the previous chapter).¹²⁷ Second, are below cost discounts targeted on a range open to competition? This is a combinatorial test.¹²⁸

¹²⁷ In the previous chapter we argued that the avoidable cost benchmark is helpful even when regarding exclusion of new entrants who may be yet to incur an entry cost that the incumbent has already sunk. For rivals that are already in the market (as is usually the case in a fidelity rebate investigation), the avoidable cost test is even more appealing. Where two firms produce an identical product and have already made any sunk investments required to produce, if the dominant firm wins share from its rival by pricing at or above avoidable cost, an equally efficient rival should be in a position to win that share back. If an equally efficient rival cannot profitably reclaim its share, it must be because the dominant firm has priced below its own average avoidable cost of production (and hence the average avoidable cost of an equally efficient firm). To put it another way, if the dominant firm prices above its average avoidable cost and the rival cannot profitably match that price, this means that the rival is less efficient and so competition authorities should not step in to allow its survival.

¹²⁸ Recall our discussion of the link to selective price cuts. In effect, we test whether the price in market B (the range open to competition) is above avoidable cost *and* whether the overall revenues from markets A and B exceed the associated avoidable costs.

4.90 This second question is difficult to address precisely unless there are excellent data on costs and buyer preferences. Nevertheless, in the previous sections we noted that we could assume:

- an *overly large* assured base of sales has been identified
- sales could be made at the list price for that assured base, and
- the appropriate measure of cost is not sensitive to the choice of the assured base.

4.91 With these assumptions, we can allocate the whole of a discount to the product that is the subject of the investigation. If we are confident that we have over-allocated a discount to that product and the implied price *exceeds* the appropriate measure of cost, this typically suggests that the discount scheme is not anti-competitive.¹²⁹

4.92 Note that in this case the appropriate measure of cost is the avoidable cost of producing in the 'range of sales open to competition' taking the assured base of sales as having already been made. Equivalently, we can consider the *incremental cost* of sales made in the range open to competition, taking the assured base as given.¹³⁰ The relevant time period for the assessment of avoidable (or incremental) cost would usually be the period over which the discount scheme applies (ie: the reference period).¹³¹ We should be confident that our choice for the assured base of sales does not affect the cost of production (we discuss

¹²⁹ We demonstrate how such a safe harbour may be applied to a rollback discount scheme found unlawful in Michelin II at endnote two to the following chapter.

¹³⁰ See previous chapter for a more detailed discussion of these cost concepts and how avoidable and incremental costs can be identical.

¹³¹ See the next chapter for a discussion of how the reference period may affect incentives. See example five below for a discussion of the relevant time period.

this in example four below). We should also be confident that we measure costs over the appropriate time period (see example five below).

- 4.93 Some numerical examples may help to illustrate the point. In all of these examples we take as given that, overall, the scheme covers its avoidable cost – we focus on the second question, whether the discount is likely to target below cost prices on the range open to competition.¹³²

Example one

- 4.94 Suppose that a dominant supplier has a list price for widgets of £1.00 and for gadgets of £2.50. Suppose the average avoidable cost of producing these goods is £0.50 and £2.25 respectively given that both are produced in the reference period. We assume that the dominant firm offers a discount of £20 conditional on a buyer purchasing 100 units of widgets and 40 units of gadgets. Further, assume that these targets are 'binding' (ie: buyers buy exactly these amounts in the reference period). If we allocate the *whole* discount to widgets, the implied price is £0.80 per unit. If we allocate the whole discount to gadgets, the implied price is £2.00 per unit. The implied price of widgets exceeds its average avoidable cost (taking the production of the other good as given). However this is not the case for gadgets and so further investigation might be required (eg: if the issue was whether a supplier with a rival gadget was foreclosed).

¹³² In addition, see endnote two to the *Michelin II* chapter. Here we show that under a wide range of cost assumptions, allocating the discount to the range of sales open to competition was unlikely to have led to below cost pricing.

Example two

- 4.95 Now suppose that the discount is 10 per cent on the list price of all purchases, provided that *at least one unit* of each product is purchased. Suppose that last year the buyer purchased substantially more than one unit of each, the implication is that the discount scheme is simply a reduction of both list prices by 10 per cent. Thus the implied price of widgets is £0.90 and of gadgets, £2.25. Neither price is below cost.

Example three – mixed bundling and BSKyB

- 4.96 When analysing the potential foreclosure effects of mixed bundling in its BSKyB inquiry, the OFT considered whether the implied incremental price of a premium channel covered its avoidable incremental cost.¹³³ We explain this test with a stylised example. Suppose that a channel provider offers a premium sport channel at £12 and a premium 'film + sports' bundle at £15. The implied incremental price of purchasing film *given* that sport is purchased is £3. If this exceeds the cost of providing the film channel, given that the purchaser is already supplied the sport channel, then the test is 'passed'.
- 4.97 In this example, the whole of the bundle discount is allocated to the film channel. The test proceeds *as if* the sale of sport was 'assured' at £12 and so the extra film sale was truly incremental revenue.¹³⁴

¹³³ OFT decision CA/98/20/2002.

¹³⁴ See Majumdar (2003) for a discussion of mixed bundling in this case.

Example four – costs are sensitive to the choice of the assured base

- 4.98 Suppose that a dominant supplier has two plants, each with the capacity to produce 500 blodgets. The supplier has 10 identical buyers which need 100 units per year. The dominant supplier sets a price of £100 for the first 80 per cent of a buyer's needs and then a price of £60 for the remaining 20 per cent. The dominant firm's cost of producing blodgets is £50 per unit, given it has spare capacity. The dominant firm incurs a fixed cost of £19,000 per plant used.
- 4.99 If the assured base of sales is assumed to be 80 per cent of a buyer's needs, then we take as given that each of the ten buyers would purchase 80 units at a price of £100. This would raise revenue of £80,000, covering the cost of £78,000 (£38,000 for running two plants and £40,000 for producing the 800 blodgets). Thereafter, each blodget is sold for £60, ie: £10 in excess of its incremental cost of £50. The test is 'passed'.
- 4.100 However, had the assured base been assumed to be 50 per cent of a buyer's needs then the test would be 'failed'. This is because the assured base of sales can be met by operating just one plant and so, by assumption, operating in the range open to competition requires opening the second plant. In this case, revenues are not sufficient to make it worth operating the second plant. The implied revenues in the range open to competition would be £42,000 (ie: 300 units at £100 and 200 units at £60). The implied incremental cost would be £44,000 (ie: 500 units at £50 plus £19,000 for running the second plant).

4.101 This demonstrates how the safe harbour test must be applied carefully when costs do not increase 'smoothly' with output (eg: due to capacity constraints).¹³⁵

Example five – relevant time period

4.102 The natural time period to consider is the length of the reference scheme. However, in some cases discount schemes may be repeated in a similar form year after year. This would point to the relevant time period being longer than the reference period.

4.103 In that case, when carrying out the first part of the test (does the scheme as a whole cover avoidable costs?), a long run measure of avoidable costs would seem appropriate, where the activity is defined as producing all units.

4.104 The appropriate level of costs for the range open to competition is harder to gauge. In theory, we might argue that this should be the long run incremental cost of providing that output, given that the assured base is produced in the most cost effective way possible. This means that we would have to identify the costs involved if the dominant firm only sold its assured base of sales over the long term. We would then ask what additional costs (in the long run) are involved in selling on the range open to competition.

¹³⁵ For example, combinatorial tests may be applied to see whether it is profitable to run each plant. In the discussion of *Virgin/BA* (see Annexe B) we note that the US authorities considered whether the effect of the incentive scheme was to induce BA to increase capacity by adding flights to its schedule (which would have incurred substantial incremental cost) or whether it was aimed to fill up spare seats on existing flights (a strategy for which the incremental cost was relatively low).

- 4.105 Notice that this is a form of combinatorial test. The assured base must be priced above the relevant long run incremental cost and so must the range open to competition.
- 4.106 It is particularly important to avoid dominant firm contriving an assured base so as to pass the safe harbour test. An extreme example highlights the point: if a dominant firm claims that its assured base is just one unit, it might seek to justify all of its fixed costs as required to produce this one unit as thereafter incremental costs could be relatively low. For this to be credible, however, it must demonstrate that it has demand for that one unit at such a high price that all of its costs would be covered.

Failing the safe harbour test

- 4.107 Failing this safe harbour test may reveal no useful information unless it is appropriate to allocate the entire discount to a single product. This is an important point because although the test is conceptually appealing, in practice it requires detailed knowledge of consumer preferences and underlying costs.
- 4.108 For example, in our first example, the implied price of gadgets was below the incremental cost when the whole of the discount was allocated to gadgets. But this makes the implicit assumption that 100 widgets would have been purchased at the list price of £1.00 (ie: this was an 'assured base of sales'). If that is not the case (eg: only 50 units would have been purchased at that price) then the discount has grown demand for widgets as well as gadgets and so it is not appropriate to allocate the whole discount to gadgets.
- 4.109 In practice, measuring consumer preferences to this precision is very difficult. Therefore, the test is to be applied only 'one way' – to identify a safe harbour when we are confident that we have over-allocated the discount. It is not a test for abuse.

Does the safe harbour leave too much room for anti-competitive behaviour?

- 4.110 In some cases, it might be argued that the dominant firm's assured base of sales allows it to obtain scale economies that are not available to its rivals. For example, where the range open to competition is too small to allow rivals to produce efficiently the dominant firm has a persistent cost advantage and can price above its own avoidable cost in the range open to competition but below that of its rivals.
- 4.111 A similar issue is to query whether there is a risk of 'circularity'. This is the idea that the assured base exists only because it is protected by low pricing in the range open to competition. But, given the assured base, the incremental cost of producing in the range open to competition is very low and so prices cover avoidable cost.
- 4.112 Our safe harbour would permit this form of pricing. However, we do not consider that this means that the price/cost test applied to the range of sales open to competition should be modified to strip out the dominant firm's cost advantage. In our view, these issues are directly analogous to the issue of above cost predation discussed in the previous chapter (eg: whether a dominant firm in market A should be permitted to benefit from the economies of scope of producing in two markets by pricing low (but above avoidable cost) in market B). If, by dint of its assured base – when correctly measured, the dominant firm is more efficient than its rivals, this should not oblige the dominant firm to price high to make room for a less efficient competitor.
- 4.113 We would not advocate intervention when price exceeds long run measures of avoidable cost. In principle, intervention might occur when a dominant firm prices above its short run avoidable cost but below long run avoidable cost (ie: that cost which an equally efficient new entrant would need to cover) where there is genuine debate as to the length of the relevant time period. Intervention should take place only where there is exceptionally good evidence that the pricing structure is intended to deny a rival the opportunity to gain an efficient scale (ie: the rival would

be equally or more efficient) and where the expansion of that rival would be sustainable and most likely to lead to enhanced competition in the long term which delivers better value to consumers.¹³⁶

4.114 We acknowledge that it is difficult in practice to identify an assured base of sales (and even where the test is met, there may in exceptional circumstances be cause for intervention). Where the results of the test are sensitive to changes in key assumptions, the test does not perform well in identifying a safe harbour. However, as noted above, our test does not rely on the precise calculation of the assured base – only that the authorities are confident that they have over-estimated the size of the discount in the range open to competition.

Does the rival have plausible, alternative ways to compete?

4.115 We noted in our discussion of selective price cuts that a rival may be able to *differentiate* itself so as to make headway in the market. The same issue must be addressed in an assessment of the effect of a fidelity rebate. These alternative strategies must be credible and not merely fanciful.

Product differentiation

4.116 Product differentiation may be a way for rivals to grow their own sales, partly at the expense of the dominant firm. For example, we discuss in our *Virgin/BA* case study the possibility that growth by BA's competitors could undermine the incentive scheme that BA offered to travel agents by growing their own shares through offering consumers a better service. BA's incentive scheme had an effect only where agents

¹³⁶ These principles – and the need to consider workable remedies and the effect of precedent – are discussed further in the recommendations section of previous chapter and summarised in the recommendations for this chapter below.

generated revenues in excess of 95 per cent of the BA ticket sales they made in the previous period. However, if competition from rival airlines meant that BA's fares became less popular, agents would find it harder to meet the 95 per cent target. As a result, BA's incentive scheme could be correspondingly weaker if the agent felt that it was more profitable to promote rival airlines than to seek to meet BA's target.

- 4.117 While the main concern is foreclosure, we note that in theory fidelity rebates could be used to dampen competition – for example, encouraging a rival to differentiate itself to such a great degree that competition between the two suppliers is weakened.

Bundled rebates – the importance of competition on other product lines

- 4.118 With multi product rebates an important issue is the extent to which the dominant firm faces competition on other product lines. (Of course, the fact that a firm is truly dominant, implies that it has substantial market power on at least one of its product lines).¹³⁷
- 4.119 First, where the dominant firm faces competition on many other product lines, buyers may often have the option of not purchasing from the dominant firm at all and instead compiling their own bundle by purchasing each component individually. This gives the dominant firm less scope profitably to foreclose rivals.¹³⁸

¹³⁷ Note that where a bundled discount covers many lines over which the Domco faces competition (and where Domco does not have good information about its buyer's demand and cost conditions), it is more likely to be appropriate to allocate the discount across product lines (ie: allocating to a single line will be an over-allocation). An example is given in the LePage's case study.

¹³⁸ Where there are transaction costs of purchasing items individually, this means that there is greater scope for exclusion. It should be noted that the dominant firm's advantage is partly based on efficiency (its ability to deliver a bundle of goods at a lower price than the stand alone prices) and partly based on the fact that it can control the stand alone prices of the goods over which it has market power.

4.120 Second, if a rival can *replicate* the dominant firm's bundle (alone or through alliances with other firms), the rival and the dominant firm can, in principle compete head on. However, to replicate the entire bundle would require that there are no entry barriers to producing the other components.¹³⁹

¹³⁹ In a US case, *Ortho-Diagnostic Systems, Inc. v Abbott Laboratories Inc.* (920 F. Supp. 455.) the court recognized the theoretical possibility that the plaintiff might be a more efficient rival than the defendant discounter but might nevertheless be driven from the market by the defendant's bundled discount, which rewarded purchasers with discounts on products not sold by the plaintiff. The issue was whether defendant Abbott, which sold five types of (non-interchangeable) blood tests, had violated Sherman Act Section 2 by providing discounts on packages of its different types of blood tests. The plaintiff, Ortho, manufactured blood tests that competed with three of Abbott's five tests. Abbott provided a discount on *all* of a purchaser's blood test purchases if the purchaser bought at least four types of tests from Abbott, and it offered a higher discount to purchasers who bought all five of its tests. Ortho complained that the discount policy unfairly disadvantaged it because it could compete with Abbott only by offering the full value of Abbott's five-product discount on its own three-product selection. The court rejected Abbott's claim that its discounting should be deemed *per se* legal because it resulted in above-cost prices. The court considered that the below-cost test might be under inclusive when bundled discounts are at issue where the discounter participates in more product markets than its competitors. Nevertheless, while recognizing that Ortho could have been excluded from the market by Abbott's bundled discounts, even if Ortho were the more efficient competitor, the court refused to hold Abbott liable because Ortho did not demonstrate that Abbott was pricing its package of products below cost or that Ortho was as efficient a producer as Abbott but was unable to compete because of the discounting strategy. (We note that requiring Ortho to demonstrate that it was as efficient as Abbott would be difficult without access to confidential information on Abbott's costs.) Nalebuff (2005) analyses this case. He finds that even though Abbott had a monopoly over two of its products, the stand alone prices charged for them left room for an efficient competitor of the remaining lines to price above cost and undercut the bundle (ie: the sum of Abbott's monopoly prices plus the avoidable cost of production of the remaining three products that were 'open to competition' was less than Abbott's bundle price for all five products).

Example

- 4.121 These points can be explained by a stylised airline example. Suppose that carrier one operates on two independent routes: JK and XY. On route JK carrier one faces competition from carrier two. On route XY carrier one faces competition from carrier three. Assume that travellers on the JK route value carrier one and carrier two's flights equally and that travellers on the XY route value carrier one and carrier three's flights equally (ie: carrier one's only advantage is that it operates both routes).
- 4.122 Suppose now that carrier one offers travel agents a commission of £50 if the agent deals with it on one route and £200 if the agent deals with it on both routes. Here, the *incremental* commission is £150.
- 4.123 Does carrier two have to match the incremental commission of £150 in order to sell to the travel agent? That depends on carrier three's commission on the XY route. For example, if carrier three offers the agent a commission of £100, then all carrier two has to do is offer commission of £101 and the agent would profit from dropping carrier one entirely. By dealing with the two 'single line' carriers, the agent serves customers just as well but earns a greater commission. The point here is that just because carrier one operates on more routes than carrier two, it is not necessarily the case that its 'bundling' of commission rates across routes means that other carriers must match the incremental commission rate.¹⁴⁰
- 4.124 Alternatively, carrier two and carrier three could form an alliance partnership and compete head to head with carrier one. In effect, the alliance partnership could 'replicate' carrier one's bundle discount.

¹⁴⁰ This holds *a fortiori* when the carriers offer differentiated services.

- 4.125 Where carrier one has substantial market power on some routes, a similar analysis may apply – the more routes that are open to competition, the more likely it is that bundling has no anti-competitive effect. For example, consider now a third route where carrier one faces *no competition*. Carrier one offers a discount scheme whereby commission is £50 for agents that purchase one route, £100 for two routes and £300 for all routes (incremental commission of £200 when purchasing the third route). In this situation, if the carrier three offers a commission of £125 and carrier two offers commission of £126, an agent does better to deal with carrier one on the monopoly route only (the agent would earn £50 commission from carrier one and £251 commission from carrier three and carrier two in total).
- 4.126 It follows that even with the monopoly element, rivals do not necessarily have to match the additional commission that carrier one offers for selling its third route, instead between them they have to offer a better commission rate than carrier one offers for its second and third routes *combined*).¹⁴¹
- 4.127 Carrier one's monopoly power in this example might provide it with the scope to set 'penalty prices'. This is the idea that where a purchaser takes a restricted set of products, it is penalised by being charged a high price. For example, if carrier one offered no commission at all where an agent purchases one or two of its routes but offered £300 commission where an agent purchased all three routes, this would mean that the

¹⁴¹ Note that there are different ways of calculating incremental commission. The first approach is to take as given that carrier one sells two flights; here the incremental commission is £200. The second approach is to take as given that carrier one sells only one flight (ie: its monopoly route); here the incremental commission is £250. Carrier two and carrier three must *between them* beat £250 to make a sale to an agent that wants to purchase all three routes. However, in offering a combined commission of £250, it is not necessarily the case that either carrier will offer £200 commission (ie: neither needs to beat the commission rate calculated under the first approach).

combined commission of the two other airlines would have to add up to £301 to induce the agent to purchase from them. Here, the agent can be thought of as being penalized for not taking carrier one's full range.¹⁴²

4.128 Carrier one's incentive to set high 'individual' prices for its monopoly route would also depend on the extent to which that would harm sales to agents who would be interested only in purchasing flights on its monopoly sector. Where demand from 'single line' buyers is strong and price sensitive, this reduces the incentive to use fidelity rebates to formulate penalty prices to create switching costs.¹⁴³

4.129 This example of penalty prices provides a possible mechanism which could be used to foreclose rivals when the carrier has substantial market power in at least one route. Further consideration must be given to whether the dominant carrier has the incentives to do this – ie: whether foreclosure would be profitable. This would need to be addressed as part of a theoretically robust and fact based story of harm to competition (see below).

¹⁴² Penalty prices are discussed in Nalebuff (2005). Consider a monopolist of product A that also produces good B, where it faces strong competition. Suppose the monopoly price of A is 100 and the avoidable cost of producing B is 20. The monopolist could threaten to charge a price of 110 for good A, unless a buyer purchases its good B as well, in which case the price of the bundle is 125. Even if an efficient rival sells at cost in the B market, a buyer that purchases 'a la carte' cannot undercut the bundle price (ie: 110 plus 20 exceeds 125). Provided the buyer *believes* the threat, the rival can be excluded. (However, if the buyer did not believe the threat and were to purchase the B product at 20, the monopolist would have an incentive to lower its price of A to 100, as that is the monopoly price if it only sells its A product).

¹⁴³ We discuss a similar point in relation to *LePage's*. Attempts to create switching costs by setting high 'penalty prices' in the monopoly market to those buyers who switch to rivals for their other needs could harm demand from buyers who would not be interested in the other products and so who would not benefit from the bundled discount.

Rollback rebates

- 4.130 In this section we summarise briefly how to assess whether rollback rebates lead to below cost pricing. A more detailed discussion is contained in the following chapter where rollback quantity rebates and incremental quantity rebates are compared.¹⁴⁴
- 4.131 A rollback rebate is where, having reached a target, a discount applies on all units, not just the additional ones purchased above the target. For example, suppose that the list price is £50 and that a discount of 10 per cent is obtained when 1,000 units are purchased. With a rollback rebate scheme, reaching the target would mean that the price of the first 1,000 units falls from £50 to £45. On reaching the threshold, it is as if the price of the 1,000th unit is negative because the buyer qualifies for a large discount on all previous units purchased. This compares to an incremental rebate scheme where the price of £45 would apply only for those units bought above the 1,000 unit threshold.
- 4.132 Rollback rebates mean that as the buyer 'approaches' the dominant firm's target, an equally efficient rival seeking to persuade the buyer not to reach the dominant firm's target would have to set increasingly lower prices (and may even have to pay the buyer to take the good). This feature of the discount scheme sometimes causes concern that the discount must be loyalty inducing or unfair.
- 4.133 However, in the next chapter we explain that focusing on an implied negative price on a small part of the overall range is not a reliable guide to the effects on competition. Rollback rebates have these implied

¹⁴⁴ Such rebates are not necessarily discounts based on the share of a buyer's needs, although when targeted at certain buyers they can be. Incremental discount schemes are analogous to offering a menu of two part tariffs – they are examples of 'non-linear' pricing which, inter alia, allow firms to obtain a contribution to their fixed costs by charging higher prices for 'infra marginal' units and lower prices on 'marginal' units (see Wilson, 1993).

negative prices as a way to provide tangible and easily communicated incentives for buyers to purchase at (or just beyond) the target. They do not necessarily imply profit sacrifice.¹⁴⁵

4.134 The question is whether these incentives are used for good or ill. A rollback scheme can be a more powerful way to target incentives compared to a 'simple' incremental rebate (ie: one where discounts *increase* as higher targets are reached). This means that when used for benign reasons a rollback rebate may perform better than an incremental rebate, which may explain why rollback rebates and associated reward schemes are commonly observed in many competitive settings where there is no plausible monopoly power explanation.¹⁴⁶ On the other hand, when used for ill, rollback rebates may well be more harmful than an incremental rebate.

4.135 This means that there are no strong economic grounds for presuming a rollback scheme employed by a dominant firm to be anti-competitive.¹⁴⁷ This begs the question of whether there are ways to identify when rollback schemes are unlikely to be harmful.

¹⁴⁵ The implied negative prices are 'out of equilibrium' offers – the supplier does not expect the buyer to purchase just below the target when it would be more profitable to purchase at the target. Indeed, the buyers may not have found it profitable at all to purchase at these prices, which is why sacrifice cannot be inferred.

¹⁴⁶ If dominant firms are observed to use these schemes but non-dominant firms are not, it does not follow that the schemes are necessarily harmful.

¹⁴⁷ We also note in the next chapter that where the rollback scheme involves very small increments in the discount as each new target is reached, a simple incremental scheme will be approximately the same as a rollback rebate scheme. Therefore, a presumption that the latter is unlawful, while the former is lawful would be inconsistent. A better approach is to consider whether the scheme has a detrimental effect on competition.

4.136 We consider it helpful to apply our high level principles for analysing foreclosure in the same way for any discount scheme, whether it involves a rollback rebate or not. Of course, the rollback nature means that it can be harder to analyse below cost pricing, in this regard the following lines of inquiry may be useful:

- does total expenditure under the rollback scheme cover total avoidable cost? If not, further analysis is required as the scheme may be predatory, and
- where total expenditure under the rollback scheme does cover total avoidable cost, is there evidence of *targeting below cost prices in a range open to competition?*

4.137 In the next chapter we discuss these points in more detail and set out a safe harbour test which can be used to demonstrate above cost pricing in the range of sales open to competition. We apply the test to a discount scheme found to be unlawful in *Michelin II*.

The role of an analysis of efficiencies

4.138 In this section we discuss briefly the role of efficiencies in Article 82 and Chapter II investigations.

4.139 First we summarise our finding in the next chapter which addresses whether the CFI's indication that dominant firms should justify their discounts by linking them to efficiency (and apparently only cost based efficiencies) is underpinned by economic principles.

4.140 We argue that:

- the essential business justification for rebates is simple – selling more at prices which increase profits. Usually this is entirely

consistent with effective competition. Whether a firm was dominant or not, this same incentive would exist. Dominant firms should not, in general, have to justify their discounts¹⁴⁸

- second, where economies of scale exist, lower prices often cannot be linked to cost efficiencies generated
- third, the nature of the bargain between suppliers and buyers will affect how discounts are offered – it is not necessarily the case that economies of scale lead to larger buyers obtaining bigger discounts than smaller buyers, and
- fourth, in the absence of economies of scale, discounts may be employed in intermediate markets to reward buyers for promoting the seller's product and/or for growing the market and/or revealing information about the state of demand. This 'demand side' efficiency is an important reason for discounts – especially 'loyalty' discounts.

Presumption of harm and an 'Article 82(3)' test?

4.141 The previous paragraphs argue that dominant firms should not be obliged to justify their discounts and note that linking discounts directly to efficiencies may not be possible.

4.142 We consider that these same points are valid for loyalty rebates. Earlier in this chapter we considered pro-competitive reasons for using loyalty

¹⁴⁸ The very notion of a need for a positive efficiency explanation itself implies an inherent distrust and suspicion for variations in price-cost margins that we believe is clearly not well founded. When considering real life pricing decisions by firms that possess some element of market power, a substantial element of pricing discretion is to be expected, and competition policy should give firms freedom to experiment with such pricing discretion except in those limited cases where their pricing behaviour can be shown to meet the standards required for a finding of abuse. Competition rules should not be used to impose a blueprint of some (probably misguided) notion of perfect competition on real life imperfect industries.

rebates. There do not appear to be strong economic grounds to presume that loyalty rebates when used by dominant firms are generally anti-competitive.

4.143 Therefore, we would not advocate a presumption that loyalty rebates are harmful with an 'escape clause' that they may be justified by efficiency considerations (we might call this an Article 82(3) test). Such an approach suffers from the problems of form-based rules discussed in Chapter 2. It would cast the net too widely by missing out several important steps in the analysis of anti-competitive effects (in particular the need for a coherent, fact based story of harm to competition) and rely on the close scrutiny of the authorities to ensure that beneficial discount schemes are 'thrown back into the water'.

4.144 This increases the risk of penalising benign or pro-competitive behaviour (because all pro-competitive discount schemes involving loyalty rebates would be 'caught' by Article 82) and thereby risks chilling a form of discounting that can be pro-competitive. An additional concern that we noted in Chapter 2 is the risk that competition authorities fail to recognise genuine efficiencies that have not yet been formally established in the economics or policy literature.¹⁴⁹

4.145 In short, a presumption that fidelity rebates are harmful is not grounded in economic principles. Fidelity rebates are best assessed under an effects-based approach. This is in line with the OECD (2003) conclusion that: 'because fidelity discounts have potentially significant pro- and

¹⁴⁹ It is worth re-emphasising Vickers (2004) who notes: '...there is a danger expressed by Ronald Coase (1972): 'If an economist finds something – a business practice of one sort or another – that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of un-understandable practices tends to be very large, and the reliance on monopoly explanation, frequent'. Although the economics of the past thirty years has reduced our ignorance, the warning is one still to heed. False inferences can be made not only about monopoly but also about anti-competitive conduct.'

anticompetitive effects, and both are highly dependent on specific features of the discounts and the markets they are found in, a case by case approach to fidelity discounts seems warranted'.

How useful is an 'indispensability' test?

4.146 In this sub-section we address how informative it is to ask whether the claimed efficiencies which arise from the discount scheme in question could be achieved by a means that is less restrictive of competition – an 'indispensability' test.

4.147 We consider this is a useful question to ask but not a key test in itself. The use of the test should be to seek to understand the business motivation of the firm, as we explain below.

4.148 First, when considering whether the efficiency could be gained by a strategy less restrictive of competition, it should be noted that the strategy should be:

- plausible and not just fanciful
- one that the dominant firm would reasonably have been expected to consider, and
- not substantially less profitable than the strategy in question in terms of generating the efficiency – in particular, the cost of implementing the strategy should not be substantially greater than the chosen strategy.

4.149 For example, suppose a dominant firm has used a fidelity rebate to encourage a retailer to promote its good in an environment of unstable demand. An alternative way of encouraging promotion would be to write a contract specifying the promotional effort and to monitor the retailer on a regular basis. This would entail substantial monitoring costs. Thus the efficiency can be generated by alternative means, but it would be a costly strategy. We noted above in the section on pro-competitive effects of fidelity rebates the situations in which fidelity rebates might

be more effective ways to generate efficiencies than quantity rebates or other discount schemes.

- 4.150 Second, a finding that an alternative strategy that meets the requirements above could have been employed is *not a sign of abuse in itself*. Instead, it is useful evidence that must be weighed in the round as part of the coherent, fact based story of harm to competition.
- 4.151 We argued in the previous chapter that where there is a strong legitimate business motivation for a particular practice, this should weigh heavily in the dominant firm's favour. A finding that the dominant firm could reasonably have been expected to meet that business objective in a way less restrictive of competition serves to weaken the dominant firm's legitimate motivation and thus claimed business justifications weigh less heavily (if at all) in its favour.
- 4.152 Where the efficiency is 'indispensable', we would not advocate that it could usually, if ever, be 'traded off' against the claimed anti-competitive effect. To the extent that the source of the competitive harm is the same as the source of the competitive efficiencies, then it is not clear how such a trade-off can be conducted.¹⁵⁰ For example, where a discount in return for exclusivity generates strong incentives for investment, the source of the concern (exclusivity) is the source of the efficiency (an appropriate environment for specific investments). Rather than attempt to trade off these effects (anti-competitive effects and efficiency effects are very hard to measure accurately enough), the 'efficiency' should instead be seen as a pro-competitive motive for the exclusivity agreement.

¹⁵⁰ Trading off the effects would require making strong assumptions as to the parameters of cost and demand which are unlikely to be robust. Similar issues arises in the assessment of efficiencies in vertical and conglomerate mergers (RBB report for DG Enterprise of the EC Commission).

4.153 Where there is clear evidence of (likely) harm to competition and consumers, the likely efficiencies would probably not outweigh this harm. Where the balance of evidence is unclear, we would advocate that there is not a sufficient case for intervention. In the latter case, the existence of efficiencies would weaken the case for intervention where such efficiencies are a sign of a legitimate business motivation or would potentially lead to lower prices (or better products) for consumers. This is to treat efficiencies as part of the competitive assessment as opposed to a 'beneficial factor' that is traded against a 'harmful factor'.¹⁵¹

4.154 In short, evidence of efficiencies could well be more important in understanding the commercial motivation behind the practices under review, as opposed to being factors that are traded off against anti-competitive effects.

Conclusion: the need for a fact based story of harm to competition

4.155 This chapter has sought to provide a framework for assessing foreclosure in fidelity rebate investigations. There is a substantial overlap between our proposed framework for analysing selective price cuts and fidelity rebates – we consider this is helpful in providing consistent economic principles for the assessment of foreclosure arising from low pricing abuses.

4.156 As with our discussion of selective price cuts, we conclude that an analysis of abuse should always provide a story of harm to competition – ie: a mechanism by which consumers end up being worse off – *and* to show that the facts of the case support this view. Rather than repeat what are essentially the same points set out in the conclusion to the

¹⁵¹ We also note that Ramsey pricing is often argued as a 'justification' for a particular pricing practice. The Ramsey principle is simple – charge lower margins where demand is more elastic; this applies whether a firm is dominant or not. See Annexe E for a further discussion.

previous chapter, we instead list some potentially helpful questions for gathering evidence in a fidelity rebate case. These questions are addressed in three case studies in Annexes B, C and D. We also provide a hypothetical example at the end note to this chapter of when intervention against a fidelity rebate might be appropriate.

Recommended steps in the assessment of fidelity rebates

4.157 Assessment of dominance – what degree of market power?

- dominance
- super dominance (theories of harmful exclusion are better developed for the latter).

4.158 What are the alternative routes to market and do they allow a viable scale for a rival to compete?

- is it feasible to achieve an efficient scale through outlets not affected by the loyalty scheme?
- is forward integration feasible (eg: absence of entry barriers downstream)?
- is direct supply credible (eg: feasible to miss out the intermediate supplier)?

4.159 What are the effects on incentives of buyers to deal with rival?

- is the discount scheme likely to affect the incentives for any buyers?
 - how large is the discount (both in percentage terms and relative to the size of rivals' sales)?
 - is the discount customised (if not, it would have a weaker effect on incentives unless buyers were very similar)?
 - how easy is it to meet the target? Is the target unreachable? Can it be met by: natural growth in demand; own effort (is this at the

expense of the rival or by growing the market); substituting a rival's product for that of the dominant firm (as is more likely for homogenous products)?

- how do incentives differ for different types of buyer? Which buyers are affected – are they the most important routes to market? Does denying access to these buyers affect the ability of a rival to operate efficiently?
- what implications are there for allocating the discount?

4.160 Does the scheme as a whole imply prices below cost? (This is the first part of the combinatorial test).

4.161 Is there any evidence of below average avoidable cost pricing targeted on all or part those sales that are open to competition?

- if not, the scheme should be presumed lawful
- can we distinguish between the dominant firm's assured base of sales and the range of sales open to competition with any confidence?
- are implied prices above the appropriate measure of cost even if the entire discount is allocated to a particular product line or a range of sales open to competition?
- can we use this as a safe harbour test where we are confident that we have over-allocated the discount? Is the appropriate measure of cost sensitive to the choice of the assured base of sales?
- what is the relevant time period over which to assess avoidable costs? Is it the reference period or is the scheme likely to be repeated in a similar form for several periods? Are costs sensitive to the choice of time period?

4.162 Is there scope for the rival to make headway by alternative strategies? Are these strategies credible?

- is product differentiation a credible way to make headway in the market?
- with bundled rebates, what scope is there for rivals to replicate the bundle (are there entry barriers which prevent this?) or form alliances to achieve the same effect?
- does the dominant firm have the incentive to create switching costs through 'penalty' pricing structures? Would this be profitable? How important are sales that would be lost from 'single line' buyers?

4.163 Is there any evidence that the rival has been harmed?

- what has happened to the rival's market share and profitability?
- are there other reasons which could explain the above?

4.164 What inferences can be made about the commercial motivations for the strategy employed?

- are there any clear objective commercial motives that would be pursued irrespective of their potential to harm competition? These should weigh heavily in favour of the dominant firm when credible and substantiated
- could the claimed efficiencies be met by a strategy less restrictive of competition that is: plausible and not just fanciful; one that the dominant firm would reasonably have been expected to consider; and not substantially less profitable than the strategy in question in terms of generating the efficiency? If such a strategy exists, less weight can be placed on the legitimate business justification (although this would not be a sign of abusive behaviour in its own right)
- the absence of a clear motivation should not lead to a presumption of anti-competitive behaviour (but means that the dominant firm has missed an opportunity to tip the balance in its favour)

- is there any useful documentary evidence that clearly demonstrates how a rival is seen as the threat to a dominant firm's market power and how the dominant firm plans to respond to that threat in a way that harms competition and consumers?
- do firms in similar industries without market power employ similar pricing structures – to what extent could this help to explain the dominant firm's pricing behaviour?

4.165 What is our theoretical story of harm to consumers? By what mechanism do prices go up or stay higher than they otherwise would have been? (Or equivalently, how is quality, service or innovation harmed?)

- how theoretically robust is the story?
- does it work best for super dominant firms? How well does the foreclosure theory apply for dominant, but not super dominant firms?
- is it a dynamic industry? How well are foreclosure theories suited to analyzing these industries?

4.166 What assumptions does that story rely on (eg: scale economies, network effects, substantial fixed costs, absence of scope for product differentiation)?

- what evidence can be adduced to support these assumptions?
- is there any ex ante versus ex post evidence?
 - what happened to market shares of complainants and the dominant firm before and after the alleged infringement?
 - what has happened to prices, quality, value for money after the alleged abuse? How does this compare to the situation before the alleged abuse took place?

4.167 Ultimately, which way does the evidence point on balance and with how much weight?

- is it a strong case or is there considerable uncertainty?
- how confident are we that consumers have been (or are likely to be) harmed as a result of harm to the process of competition?
- since low prices are generally to be encouraged, the standard of proof should be high.

4.168 The case for intervention should take into account the prospect of workable remedies and the risk of adverse precedent:

- are remedies workable? Are they easily circumvented? What monitoring requirements do they entail? What adverse side effects might they have?
- in the rare cases where a decision to intervene is taken even though the dominant firm has a good case that its motivations were benign, the authorities should consider a 'no blame / no penalty' approach and statements which 'ring fence' adverse precedent
- intervention to 'manage' competition and to give rivals a 'helping hand' is not appropriate for Article 82 / the Chapter II prohibition. The 'special responsibility' of dominant firms should not be used to justify such interventions.

Endnote one – hypothetical case study where intervention might be appropriate

Introduction

4.169 In this end note, we analyse a hypothetical loyalty rebate which might be found to be harmful when our suggested framework is applied.

Background

4.170 Domco is a dominant manufacturer of widgets in the UK. The widgets are consumables for durablocs, which are durable machines used to produce a final product, X.

4.171 Domco is the incumbent manufacturer of durablocs and until recently it enjoyed a monopoly in the sales of these machines in the UK. Comco, the only other seller, entered this market two years ago by shipping durablocs to the UK from its base in Europe.

4.172 Domco and Comco are the only suppliers of widgets, each supplying for its brand of machines. Comco's widgets are incompatible with Domco's machines and Domco's widgets are incompatible with Comco's machines. Furthermore, Domco has a patent on its own widgets which will expire in three years. Comco widgets are not patent protected; Domco could supply this type of widgets if it wished to do so. At present, in order to produce X, an intermediate buyer has to purchase both widgets and durablocs from the same supplier.

4.173 Domco's current list price for a widget is £550. An analysis of Domco's costs indicates that its variable production cost is £400 per widget per year, excluding any allocated overheads.

4.174 The total market size for widgets is 10,000 widgets per year and there are about 100 buyers across the UK. Buyers are broadly similar in size and so their typical 'need' is 100 widgets per year.

4.175 As noted above, demand for the durablocs originates from the same buyers that purchase widgets. Demand arises from the need to renew durablocs or, very occasionally, when there is new entry into market X. Durablocs consume 10 widgets per year. There are around 1,000 durablocs in the industry – most of those being Domco durablocs. Wear and tear means that, on average, buyers renew 20 per cent of their durablocs in a year.

4.176 Sales of durablocs are fairly stable year on year. Domco's price of durablocs is £12,500. Historically, annual sales have averaged around £2,500,000.

Loyalty rebates

4.177 Prior to the entry of Comco, Domco had not offered any discounts on widgets. In the year after Comco's entry, Domco increased its list price from £500 to £550 and set up a rollback rebate scheme, where a buyer earns discounts on all its widget purchases from Domco in a year, conditional on meeting certain threshold shares of its total widget purchases in that year.

4.178 Domco also announced that any buyer that entered the scheme immediately would have the right to purchase according to the following schedule for the next five years.

Table 4.2: Share of Domco widgets

Share of Domco widgets in total widget purchases	Applicable discount rate
60%	0%
70%	5%
80%	10%
95%	15%

4.179 Following the introduction of the scheme, Comco complained to the OFT arguing that the rebate scheme led to foreclosure.

Application of our proposed framework for analysis

4.180 In this section we apply our proposed analytical framework to the available evidence.

Does the firm have market power?

4.181 Domco has a high market share in the relevant machine market mainly due to its incumbency. In the first year that Comco entered the market, its share of new machines sold was 45 per cent. In the following year, it fell back substantially. Comco's entry at a 45 per cent share was due to many producers of X being eager to try out the new machines introduced by Comco and thereby sourcing some or all of their annual needs from Comco.

4.182 It is estimated that over 90 per cent of the stock of durablocs are Domco machines and hence use Domco widgets. This translates to Domco having over 90 per cent share of the widget sales. Domco notes that its high share in widgets is due to its patent.

4.183 De novo entry is unlikely. Entry by European producers such as Comco is feasible provided that durablocs can be shipped across in sufficient quantities – at least 200 units in one shipment. Comco shipped 200 units across last year and kept the unsold units in storage. Durablocs that have been in storage for over six months must be tested for faults before they can be sold as brand new.

4.184 Buyers are sophisticated and understand that purchasing a durabloc will typically require the purchase of 10 widgets per year and that durablocs last five years on average. Buyers whole-life cost and assess the 'system' price, ie: the lifetime cost of producing the final product. For example, the average annual cost of purchasing a Domco system is £2,500 for the durabloc (ie: £12,500 divided by the five year life time) plus the cost of 10 widgets.¹⁵²

4.185 The OFT finds that Domco has substantial market power due to its incumbency advantage and patent protected widgets. The OFT notes that while importing rival durablocs is feasible, the absence of scope for de novo entry combined with the costs of importing from Europe indicate that at present there is at best moderate competition from potential entrants.

Do rivals have sufficient access to final consumers through other means?

4.186 In the present case Domco and Comco sell widgets and durablocs directly to the producers of the final product. Direct sales are the only route to market. The case cannot be dismissed due to the existence of alternative routes to market.

¹⁵² For simplicity, we ignore the time value of money.

Does the pricing practice have a material effect on the incentives of the buyers?

- 4.187 Just prior to the introduction of the scheme, over 90 per cent of the stock of machines was Domco machines.
- 4.188 The OFT's evidence from a survey of buyers indicates that when making their decision to purchase durablocs, buyers took into account likely costs of widgets.
- 4.189 Buyers noted that the scheme penalised them for purchasing less than 80 per cent of their widget needs from Domco, in the sense that meant they would have to pay a higher price than last year's list price of £500. Buyers also noted that they were not aware of any increases in material costs that would justify such a price rise.
- 4.190 Most buyers also remarked that due to their installed base of Domco machines, they would typically require at least 80 per cent of their widget needs from Domco in the first year.
- 4.191 Domco's five year pricing commitment indicated that if buyers replaced worn out machines with Comco's durablocs, this would jeopardise their ability to qualify for Domco's widget discount in future years. They noted that in the final year of the scheme there might be a new producer of Domco compatible widgets (as Domco's patent would have run out) however this was too speculative to affect their current purchase decision.
- 4.192 Buyers also felt that purchasing at least 95 per cent of their needs from Domco was a good deal. The 15 per cent discount meant that the discounted price was lower than Domco's list price last year.
- 4.193 The OFT considered that the structure of the discounts combined with their survey evidence meant that further investigation was required – the scheme clearly had an impact on buyer incentives.

Can rivals profitably offer buyers a better deal?

4.194 Comco complained that Domco's incumbency advantage combined with the absence of demand growth meant that, in effect, Comco was competing for relatively few sales each year. Domco's captive base of widgets ranged from a minimum of 60 per cent to over 90 per cent.

4.195 The OFT assessed this argument in the following table which sets out the implied incremental price of Domco's widgets, taking as given captive sales of either 60 per cent, 70 per cent, 80 per cent and 95 per cent. The table assumes total needs of 100 widgets, which is a reasonable representation for most buyers.

Table 4.3: Incremental price of Domco's widgets

Assured base	Expenditure at assured base	Incremental expenditure to reach 95% target	Implied incremental price when purchase 95% from Domco	Incremental expenditure to reach 100%	Implied incremental price when go to 100% from assured base
60%	£33,000	£11,413	£326	£13,750	£344
70%	£36,575	£7,838	£314	£10,175	£339
80%	£39,600	£4,813	£321	£7,150	£358
95%	£44,413	£0	Na	£2,338	£468

- 4.196 The first column indicates the assured base for different types of buyers. The second column indicates the necessary expenditure to attain that assured base, assuming that only the assured base is purchased from Domco. The third column indicates additional expenditure to reach the 95 per cent target. The fourth column calculates the implied incremental price when moving from the assured base to the target. The fifth column calculates incremental expenditure to move from the assured base to exclusive purchasing. The final column calculates the implied incremental price of moving from the assured base to exclusive purchases.
- 4.197 The OFT argued that the scheme provided a very strong incentive for buyers to purchase 95 per cent of their needs from Domco. An equally efficient producer of widgets could not profitably match Domco's price over that range as the implied price is below the average variable cost of £400 (the OFT considered that over a year, this was the best measure of average avoidable costs).
- 4.198 Domco argued that there is scope to undercut its price on the final five per cent of a buyer's needs because the implied price is £468 per widget (ie: £550 less the 15 per cent discount). This lies above the average variable cost of production. However, the OFT noted, five per cent of a buyer's needs is only five widgets per year. One durabloc machine requires ten widgets per year. The incremental price of moving from 90 per cent to 100 per cent of a buyer's needs is £220 – once again, less than the average avoidable cost.
- 4.199 Domco then argued that buyers consider the system price and so would not only consider the price of widgets: even if it was selling some widgets below cost given its captive base, its system price might nevertheless be above cost. The OFT considered this a reasonable argument and so checked the evidence. The OFT considered that avoidable costs needed to be considered on a five year basis due to Domco's pricing commitment. On this measure, the OFT found that the system price was below cost.

- 4.200 The OFT also put forward the view that Domco had set 'penalty prices' for buyers who reduced purchases of Domco widgets. The OFT noted that were Comco to account for 10 per cent of a buyer's needs, this would entail a loss of at least £180 per widget (ie: £1,800 per durabloc machine per year, since each machine used ten widgets per year). If Comco accounted for 20 per cent, 30 per cent or 40 per cent of a buyer's needs (ie: that buyer had up to four Comco durabloc machines), compensating the buyer for the lost discounts would entail making a loss on widget sales of at least £40 per widget – that is at least £400 per year, per machine. Over a five year period, this amounts to at least £2,000, ie: 16 per cent of Domco's price for durablocs. The overall effect of these penalty prices, argued the OFT, was to force an equally efficient rival to price the system below cost.
- 4.201 Domco argued that the OFT's analysis was wrong – Comco could compete for the totality of a buyer's needs, in which case the above argument would not apply (implied prices were above cost for a buyer that was locked in to 40 per cent or less of its needs from Domco). If a buyer with ten Domco durablocs replaced the two worn out machines each year with a Comco machine (assuming that the Domco machines wear out before the Comco machines due to their age), Domco's scheme implied an average price over the five years of £427 per widget.
- 4.202 The OFT responded that avoidable costs tend to increase with the relevant time period. The OFT's calculation indicated that over five years the relevant avoidable cost was not £400 but £450, which exceeded Domco's implied price of £427.

Commercial motivations

- 4.203 Domco was asked to explain the commercial motivations for its discount scheme. Domco argued that it sought to keep volumes of widgets produced high, so as to benefit from economies of scale. Prior to the entry of Comco, Domco had not needed to operate this scheme as its volumes were assured. Domco said that it could have used a quantity target instead of a share of needs target but it would have been more or

less identical in effect because the buyers in the market are of similar sizes.

- 4.204 The OFT found that Domco's argument was reasonable in theory but did not fit the evidence. The OFT found that, given that Domco produced durablocs, the average incremental cost of producing widgets was broadly constant.
- 4.205 The OFT also discovered documentary evidence from minutes of strategy meetings involving Domco's directors. The minutes indicated a plan to: 'marginalise Comco in the UK market, so as to ensure there was no other viable widget producer in the UK when Domco's lucrative patent protection ended.'

Fact-based story of harm to competition

- 4.206 Based on further documentary evidence and its own analysis of importing costs, the OFT concluded that Domco sought to use its discount strategies to eliminate UK competition from Comco.
- 4.207 The OFT argued that Domco sought to deny Comco economies of scale in shipping durablocs to the UK from Europe – or, where large shipments were made, forcing Comco to leave most durablocs in storage at considerable expense.
- 4.208 The OFT argued that buyers' reactions to entry by Comco demonstrated a demand for the rival product and how demand had fallen back substantially as a result of the first year of Domco's scheme. Further, the OFT noted that if Comco remained in the UK market, this would be likely to reduce not only the price of durablocs but also the price of widgets: once Domco's patent expired, Comco would have the ability to produce Domco widgets.
- 4.209 Domco argued that Comco could have produced its widgets anyway once its patent expired; this was irrespective of whether it sold durablocs in the UK. However, the OFT argued that Comco's presence in the UK would help it to establish a recognisable brand name and thereby

enhance its ability to sell Domco compatible widgets. The OFT cited evidence from a study involving Domco's parent company in the US. The study assessed the effect of a similar patent expiring and found that the only 'generic' producers of widgets that had been successful were those that already had a US presence in durablocs and a strong brand name.

4.210 Domco argued that its behaviour did not leave buyers worse off. Domco pointed to the survey evidence that showed buyers thought its 15 per cent discount was a good deal. Further, Domco argued that there was no evidence that Comco planned to leave the UK market. Domco argued that exit was not credible as some buyers were now locked in to purchasing Comco widgets and so exit would harm Comco's reputation, tarnishing its image in Europe as well as the UK. Domco argued that Comco had deep enough pockets to sustain a temporary loss and that it was quite normal to make losses in the short term when entering a market.

4.211 The OFT argued that Domco's prices were intended to cause exit and that they raised the likelihood of exit considerably. Further, the OFT argued that prices would be even lower for buyers if Comco established itself, citing the same study of Domco's parent company in the US which found that entry lowered prices.

4.212 Finally the OFT noted that exit would, as Domco had noted, tarnish Comco's image in the UK. This, alleged the OFT, was Domco's plan to ensure that Comco could not re-enter the market and start to produce Domco compatible widgets. The OFT argued that exit was credible as Comco would not leave its buyers stranded without widgets, it would simply not seek to expand further in the market. Buyers would soon realise this and demand for Comco durablocs would cease.

Conclusion

4.213 The OFT found Domco to have infringed the Chapter II Prohibition. The OFT ordered Domco to cease its discount scheme and to refrain from introducing any schemes over the next five years which had the effect

of targeting below cost prices on those sales for which Domco faced genuine competition.

4.214 Domco argued that the OFT had not demonstrated a sufficient likelihood of harm to consumers and appealed the case to the appellate court.¹⁵³

¹⁵³ This case study is purely hypothetical it is not based on any current or past case known to the authors.

5 ECONOMIC PRINCIPLES AND THE MICHELIN II PRECEDENT ON LAWFUL REBATES

5.1 In this chapter we discuss selective parts of the CFI's judgement in *Michelin II*.¹⁵⁴ Our aim is not to discuss the details of the particular case – rather, the intention is to highlight important precedent established (or re-confirmed) by the CFI and discuss the extent to which this is underpinned by economic principles.¹⁵⁵

5.2 First we highlight some main points from the judgment, including the CFI's view on criteria for legal rebate schemes. Second we discuss the how well the CFI's criteria for a legal rebate scheme fit in economic principles. We discuss:

- the reference period
- incremental rebates versus rollback rebates
- rebates linked to efficiency, and
- uncertainty and unfairness

5.3 Finally, we offer concluding remarks.

¹⁵⁴ COMP/E-2/36.041/PO-Michelin OJ [2002] L 143/1, CFI Case T-203/01.

¹⁵⁵ There is not the scope here to summarise all the relevant legal principles relating to low pricing behaviour. For a discussion of these principles, see Whish (2003).

Summary of the Judgment

5.4 In this section, we summarise the main points of the CFI's judgment.

Definition of abuse and special responsibility of a dominant firm

5.5 The judgement reconfirms existing case law. The CFI states that abuse is an objective concept referring to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is already weakened and which, through recourse to methods different from those governing normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition.

5.6 The CFI reconfirms that while being dominant itself is not unlawful, a dominant firm has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market. The dominant firm is entitled to protect own commercial interests when attacked, but not where this has purpose of strengthening dominant position (paragraphs 54-55).

5.7 In Chapter 2 we set out our preferred 'economics based' definition of an exclusionary abuse as behaviour that would have two characteristics: (a) it would (be likely to) harm the process of competition; and (b) ultimately consumers would (be likely to) suffer as a result. Chapter 2 also discusses how the meaning of a special responsibility is unclear – is it simply a reminder not to behave anti-competitively, or does it mean that

the dominant firm should go out of its way to promote the needs of its rivals? We advocate the former interpretation.¹⁵⁶

Effect on competition

- 5.8 The CFI gives an indication that harm to competition is the key feature of an abuse: 'conduct will be regarded as abusive only if it restricts competition' (paragraph 237). The CFI states that abusive conduct does not have to be shown to restrict competition, just that it is capable of having that effect (paragraph 239).¹⁵⁷ The CFI states that anti-competitive object and effect are the same (paragraph 241). The CFI gives the AKZO judgment as an example, interpreting the judgment to say that pricing below AVC is abusive because the intention must be to eliminate a competitor; there is no need to show that elimination actually occurred (paragraph 242).
- 5.9 We note that while it is not unreasonable to question a dominant firm's motives for pricing below AVC, there are several beneficial reasons for such behaviour that should allow a dominant firm to rebut a presumption

¹⁵⁶ We also note the potential ambiguity with the statement that a dominant firm can protect its own commercial interests when attacked but not where this strengthens the dominant position – if attacking a dominant firm's position would weaken that position, then presumably defending the position strengthens it!

¹⁵⁷ In our view the standard of proof for low price abuses should be to not only show that behaviour is 'capable' of harming competition but that it is likely (or even very likely) to have that effect in the near future on the basis of the available evidence. So while we acknowledge that it is not always necessary to show that an abuse actually harmed consumers (for example because some abusive behaviour may not have immediate effect), it would still be necessary to show that the behaviour is likely to have a harmful effect in the near future. If not, there is a real risk that well meaning authorities set precedents that chill beneficial price competition. This issue is discussed in detail in Chapter 2.

that pricing below average variable cost is abusive. We discuss this in the chapter on selective price cuts.¹⁵⁸

Loyalty rebate – definition and per se abuse

- 5.10 The CFI defines a loyalty rebate scheme is one that: 'is granted in return for an undertaking by the customer to obtain his stock *exclusively or almost exclusively* from an undertaking in a dominant position' (paragraph 56, emphasis added).
- 5.11 The CFI states clearly that a loyalty rebate is contrary to Article 82 (paragraphs 56 and 65 for example). Its reasoning is that: '[s]uch a rebate is designed through the grant of financial advantage, to prevent customers from obtaining their supplies from competing producers...'
(paragraph 56).
- 5.12 The CFI cited exclusive dealing requirements set by a dominant firm to be per se abusive as well (paragraph 174).¹⁵⁹
- 5.13 In short, the CFI identified a formalistic approach that fidelity rebates are *per se* abusive when employed by a dominant firm.

CFI view of foreclosure by loyalty rebates

- 5.14 The CFI considers that loyalty rebates have a foreclosure effect (paragraph 66). It is clear that the CFI considers foreclosure to relate to

¹⁵⁸ See also OFT414a, paragraph 4.12.

¹⁵⁹ We discuss in Chapter 2 our view that this form-based, *per se* approach is inappropriate and note in the preceding chapter that the definition of fidelity rebates set out in the *Michelin II* judgment is too wide to be of use.

the *customers* of the dominant firm by financially inducing them not to deal with the dominant firm's rivals.¹⁶⁰

- 5.15 The CFI defines foreclosure to be at the *customer* level and by implication would appear to disregard whether there are alternative routes to market. For example, rather than examining whether the growth in market share of Michelin's rivals was a sign that Michelin's discount schemes did not foreclose the *market*, the CFI instead seems to have presumed that the growth in rivals' shares would have been quicker had it not been for the discounts (paragraph 245). There is no discussion of how consumers may have suffered as a result. Taking these points together, it might be inferred that making life harder for rivals was considered in this case to be sufficient to harm competition (see paragraphs 235-246).¹⁶¹
- 5.16 We consider that having an economic definition of abuse (as set out above) would help to avoid this risk.

When does the law permit quantity rebates?

- 5.17 This section sets out five suggestions made by the CFI regarding lawful rebates:
- *Short reference period.* In the view of the EC Commission, an incremental rebate scheme with a reference period of three months would not be abusive (paragraph 48). The CFI mentions that the

¹⁶⁰ See for example paragraph 60, '...remove or restrict the buyer's freedom...'; paragraph 66, 'prevent them from obtaining supplies from the applicant's competitors', and paragraphs 110, 240 and 244.

¹⁶¹ We seek to address this problem by our screening framework described in the previous chapter where we argue that alternative routes to market should always be considered in a foreclosure case.

longer the reference period of a quantity rebate, the more likely that it has a loyalty inducing effect (paragraph 85)

- *incremental discounts but not rollback rebates.* The CFI indicates that quantity rebates are usually permissible, where the discounts apply to incremental sales, as opposed to the entire turnover (paragraph 101). Incremental discounts are deemed to reflect gains in efficiency and economies of scale (see for example paragraphs 58, 72 and 98). On the other hand, rollback rebates of one year duration that have a sliding scale where there is a large difference in start and end price are loyalty inducing (and hence abusive, paragraph 95)
- *discounts linked to economies of scale.* The CFI refers to quantity discounts noting that they potentially have an 'economically justified countervailing advantage' (eg: paragraph 59). It is not entirely clear what this means. It would certainly include economies of scale but it may also include rewarding activities that grow the market as suggested at paragraph 100: '*justified by the volume of business they bring* or by any economies of scale they allow the supplier to make' (emphasis added)
- *absence of uncertainty.* The CFI considers that discounts based on anticipated sales are less likely to be loyalty inducing¹⁶²
- *fairness as in the absence of supplier discretion.* Although it is stated that 'conduct will be regarded as abusive only if it restricts competition' (paragraph 237), the CFI discusses unfairness as if it were an abuse on its own. The CFI considers that loyalty rebates are linked closely to unfairness (paragraph 66). The CFI also considers

¹⁶² The CFI noted that in *British Gypsum*, discounts were given on forecast sales not actual sales achieved. Customers faced no uncertainty as to the discount they would obtain. The CFI also noted that British Gypsum's discounts were based on actual cost savings (paragraph 84).

that where a supplier has considerable discretion over the final discount, this almost inevitably leads to discrimination (145) and is unfair and thereby constitutes an abuse (141).

Discussion of CFI criteria for a legal rebate scheme

5.18 This section discusses the extent to which economic principles underpin the five criteria set out in the previous sub-section.

Reference period

5.19 Here we discuss how a shorter reference period may increase or decrease the incentives of a buyer to purchase from a dominant supplier. Although we consider a highly simplified setting, the basic principles would carry over to more complex settings.

Example one

5.20 Consider a scenario where a buyer purchases widgets from a dominant supplier (Domco) or a rival. Both firms produce identical goods and have a list price of £10. Suppose that Domco sets an *annual* target of 120 units. If the buyer meets the targets, it obtains a discount of £1 on each unit purchased in the year. Suppose that the rival offers a *monthly* target of 10 units. For any month that 10 units are purchased, the discounted received is £1 on each unit purchased in the month.

5.21 In a simple setting where the buyer is *certain* of purchasing 10 units per month, the schemes are equivalent. The length of the reference period makes no difference.¹⁶³

¹⁶³ We assume that all discounts are paid at the end of the year so that the timing of payments is not a reason to choose one scheme or the other.

- 5.22 Now consider 'stochastic' demand. Suppose that the buyer expects to purchase 120 units a year, but monthly demand is volatile due to seasonal effects (eg: in the first six months sales are very low and in the last six months they are very high). At the start of the year when the buyer decides which contract option to pursue, it may well prefer the annual contract if the seasonal effects mean that it is unlikely to qualify for the monthly discount in most months in the low season.
- 5.23 However, suppose that six months into the annual target the buyer considers that meeting the annual target is very unlikely because the 'low' season has been particularly bad. It may then prefer to switch to the monthly option (eg: because in the high season sales should exceed 10 units per month). Although the buyer would forgo the opportunity to earn a discount on all units bought in the year from Domco, if obtaining that annual discount appears very unlikely it may prefer to give itself the opportunity to obtain a discount on units bought in the next six months from the rival.
- 5.24 On the other hand, had demand in the low season turned out to be better than expected (so that the buyer did not drop out of the annual scheme) and had the buoyant demand continued into the high season, it is possible that the buyer would meet the target early (eg: after 10 months). In this case, it would find it profitable to buy from the rival for the final two months (assuming that Domco's annual discount is not conditional on sourcing all of its sales from the dominant firm).
- 5.25 This simple example serves to demonstrate how the time period itself must be seen in conjunction with other factors, in particular the stochastic nature of demand. There is no simple relationship between the length of the reference period and the loyalty inducing effect.

Example two

- 5.26 A supplier has a list price of £1. It offers two discount schemes. In scheme A, there is a lump sum rebate of £200 for any buyer that purchases 1,200 units in a calendar year. In scheme B, there is a lump

sum rebate of £1,000 for any buyer that purchases 6,000 units over a five calendar year period.

- 5.27 If we look at both schemes from a five year perspective, they are identical. Each offers a discount of £1,000 on the purchase of 6,000 units at a list price of £1. The difference is that scheme A provides the discount in tranches (£200 each year) and so the incentives that apply within the five year period are different.¹⁶⁴
- 5.28 Imagine a buyer that needs 100 units per month with certainty (ie: we ignore stochastic effects so as to focus on other within-period incentive effects). Under scheme A, at the end of each October the buyer would have purchased £1,000 worth of units. Remaining in the scheme for the next two months allows him to obtain his next two months' needs for free as so there is good reason not to purchase from a rival.
- 5.29 Under scheme B, once the buyer has been in the scheme for four years and two months, it is in a position where it has purchased £5,000 worth of units and so remaining in the scheme for the next ten months allows him to obtain his next ten months' needs for free.
- 5.30 So under scheme A, the strongest incentive to remain in the scheme is target in the final quarter of each year. Under scheme B, the strongest incentive to remain in the scheme is in the final year.
- 5.31 Scheme A could be more exclusionary than scheme B where, say, a seasonal effect means that the supplier faces competition only in the last quarter of the year. On the other hand, scheme B could be more exclusionary than scheme A where the supplier faces a new entrant that would not be in a position to start production until, say, the beginning of year five. (Under scheme B, the entrant would have to offer five times as

¹⁶⁴ In the following discussion we assume that £1 in five year's time is worth £1 today.

much compensation to induce the buyer to switch for the final year compared to scheme A).

Example three

- 5.32 Demand changes rapidly and is predictable with reasonable certainty only over a period of three months.
- 5.33 If the dominant firm sets an annual target, its target could soon become out of date. However, if the dominant firm sets a quarterly target, it can (in effect) update the target according to the new information available on demand and better target incentives. Thus, if the dominant firm wishes to act anti-competitively, it may well prefer the shorter reference period.

No simple relationship between length of reference period and anti-competitive effect

- 5.34 The concern with long reference periods might be based on a belief that the discount scheme induces exclusivity and long term exclusive contracts are anti-competitive. In this regard, it is worth noting that:
- (a) discounts schemes do not necessarily induce exclusivity (as the previous examples demonstrate), and
 - (b) long term exclusivity agreements are not necessarily anti-competitive (as we discussed in the previous chapter, they might provide an appropriate environment for investment for example).
- 5.35 In short, there is no simple relationship between the length of the reference period and the likelihood of anti-competitive behaviour. The potential foreclosure effect of a discount scheme must be assessed in the round, according to the framework suggested in the previous chapters.

5.36 When assessing the importance of the reference period, issues to consider would often include the following:

- the relevant decision making period (eg: if businesses make strategic decisions about changing suppliers on an annual basis then a monthly reference period does not necessarily allow for more switching than an annual reference period)¹⁶⁵
- how incentives change over the reference period (eg: if the reference period is five years, even two years into the scheme the buyer may still be very far from meeting the target such that it would switch to a rival offering a smaller but *immediate* discount rather than hang on for a larger discount in the future. To put it another way, it may be that incentives to stay in the scheme are strongest when the buyer is close to the target (see example two above)¹⁶⁶
- whether the start date of the reference period is fixed and which buyers join at the start (eg: suppose we have a five year reference period which starts on 1 January 2002. For those buyers who do not join the scheme immediately, there will be an even weaker incentive to join later as there would be a reduced scope to earn qualifying units)

¹⁶⁵ In terms of economic modelling, we note that the analysis usually employed is a single period analysis (as in the discussion at endnote one to this chapter for example), ie: as if the reference period is the same as the buyer's decision making period.

¹⁶⁶ The trade off depends on the relative sizes of the discounts and the 'discount factor', ie: how firms value profits in the future versus profits today.

- how easily the target can be met over the reference period (eg: even if the reference period is long, if the target to obtain the discount can be met within the time period without difficulty, the buyer may view the discount scheme as little more than a lower list price)¹⁶⁷
- whether buyers are contractually (or otherwise) locked in (eg: in the above example, the buyer switches to the rival because sales are so bad for the first four months – however, if switching involved a fee for breaking the contract as well, the buyer would be less inclined to switch)¹⁶⁸
- whether leaving the scheme and rejoining affects the discount earned (eg: compare a scheme X in which Domco offers a discount at the end of the year for buyers that purchase at least 100 units per month in *each* month and scheme Y where the end year discount is based on purchasing 1,200 units, irrespective of when they were purchased in that year. Scheme Y offers greater flexibility to a buyer to purchase from a rival over the year)¹⁶⁹

¹⁶⁷ Where a buyer's incentive is to reach the target and from then onwards switch to a rival, a long reference period may have little effect if the target is easy to meet within the reference period.

¹⁶⁸ It is also worth noting that if the discount is paid up front on the expectation that the buyer will meet a target, it may be harder to leave a scheme as that would incur reimbursing the supplier (this could matter where firms face cash flow difficulties).

¹⁶⁹ For example, under scheme Y, if the buyer had made good sales over the year such that it reached the 1,200 units target by October, it could switch away from Domco entirely and try a rival's input in November and December without losing the entire discount. Under scheme X, however, such switching would mean forfeiting the discount for failing to meet the 100 unit per month requirement.

- whether buyers have incentives to agree to 'lock themselves in' to long reference periods if that would harm competition among their suppliers or whether the motive for lock-in is to promote investment¹⁷⁰
- the importance of the buyer(s) affected by the discount scheme as distribution outlets (do they account for a relatively large share of available outlets so that there are relatively few 'free' buyers) and the minimum viable scale for the rival (ie: whether rivals would need to deal with a large proportion of buyers to obtain an efficient scale of production or network effects)
- whether contracts are staggered such that at any point in time only a relatively small portion of buyers are in a position to switch from

¹⁷⁰ As noted above, the CFI objects to the idea that loyalty inducing schemes lock-in or tie customers to a dominant supplier, leaving them unable to switch to the best deal on the market at any particular time without incurring a financial penalty (see example paragraphs 110, 240 and 244). It should be noted that customers do not blindly agree to exclusive purchasing deals. Usually, they agree to them only if they are appropriately compensated for giving up the right to deal with a dominant firm's rivals. (For example, sometimes such lock-in is important to promote investment. If (say) a buyer had the freedom to stock rival suppliers, this might discourage the dominant firm from investing in the buyer, fearing that the investments would benefit its rivals.) This is not to suggest that lock-in can occur only in the best interests of the buyer. There could be circumstances where buyers would agree to conditions that may work against them in future. This may be due to informational asymmetries (eg: Aghion and Bolton (1987)) or coordination problems among buyers or due to a successful divide and conquer strategy employed by the dominant firm. Examples of the latter practices are discussed in the chapter on selective price cuts.

Domco to a rival (again, this could be important where the rival must achieve a minimum viable scale)¹⁷¹, and

- the contract length agreed in similar industries between buyers and suppliers without market power (this may indicate whether a long reference period is an *outcome* of effective competition as opposed to a feature that may distort competition).

Incremental discounts versus rollback rebates

5.37 This section discusses the difference between incremental rebates and rollback rebates and the implications for policy. We refer to sliding scale schemes, ie: schemes where there is more than one target.

5.38 We address the following issues:

- diagrammatic representation of these discount schemes
- implied negative prices in rollback schemes and what can be inferred from these
- possible reasons to use rollback rebates instead of a simple incremental rebate schemes and what can be inferred from these
- targeting below cost prices on a range open to competition
- a safe harbour test for rollback rebate schemes, and
- inconsistent presumptions.

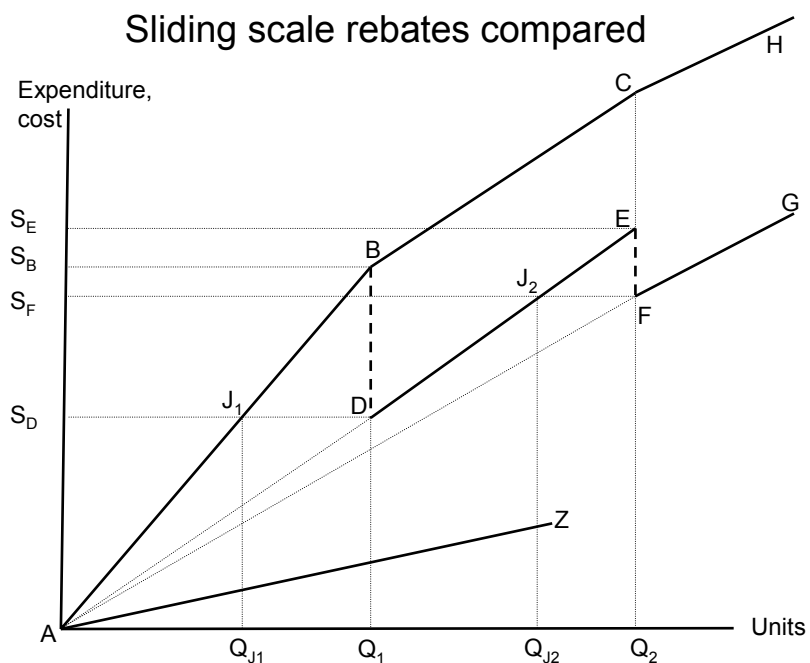
¹⁷¹ In *Canada Pipe* (see Annexe D), the scheme in question started at the same time for all buyers. This meant that on 1 January each year, a rival could – in principle – win contracts to supply all buyers.

- 5.39 Our main findings are as follows. First, a rollback scheme can be a more powerful incentive tool than a simple incremental rebate scheme (where the incremental rebate scheme is such that discounts *increase* as higher targets are reached).
- 5.40 Second, there should be no presumption that rollback rebates are exclusionary because they involve implied negative prices. Such 'prices' are a feature of providing stronger incentives to purchase at the target but are not necessarily a sign of profit sacrifice or exclusionary behaviour. This means the key question is whether inducing a buyer to purchase at the target has an anti-competitive effect.
- 5.41 Third, we find that there are both beneficial and anti-competitive reasons for using rollback rebates. This means that when used for beneficial reasons a rollback rebate may be better for consumers than an incremental rebate. On the other hand, when used for ill, rollback rebates may well be more harmful than an incremental rebate.
- 5.42 This confirms that there should be no presumption that rollback rebates are harmful and we suggest safe harbours which indicate when rollback schemes are unlikely to harm competition.

A diagrammatic representation of incremental and rollback rebates

- 5.43 The diagram below compares incremental and rollback rebate schemes. The horizontal axis depicts the units purchased. The vertical axis describes total expenditure.

Chart 5.4: Sliding scale rebates compared



5.44 The incremental rebate scheme is the expenditure schedule ABCH. As each target is reached (the targets are at Q_1 and Q_2), the discount received on incremental units is larger and so the schedule becomes flatter (the gradient of BC is greater than that of CH).¹⁷²

5.45 The rollback rebate scheme is the expenditure schedule ABDEFG. At Q_1 expenditure falls from S_B to S_D because the rebate is paid on all units.

¹⁷² This form of incremental rebate scheme can be replicated by offering a menu of 'two part tariffs'. The objective in offering such a menu is to price discriminate between buyers who are expected to choose the tariff structure designed for them. For a general discussion of two part tariffs and other discount schemes see Wilson (1993).

Similarly, at Q_2 expenditure falls from S_E to S_F . This creates two 'spikes' or a 'saw-tooth' effect.¹⁷³

- 5.46 Schemes with more than one target are sometimes called 'sliding scale' schemes – thus the schedule ABCH is a 'sliding scale incremental rebate scheme' and the schedule ABDEFG is a 'sliding scale rollback rebate scheme'.

Implied 'negative prices' in rollback rebate schemes

- 5.47 The 'saw-tooth' effect noted above created by rollback schemes means that over part of the expenditure schedule there are implied 'negative prices'. For example, consider the point J_1 where Q_{J_1} units are purchased. At this point, the buyer pays S_D , the same as it would cost to buy Q_1 units. Thus the remaining units up to Q_1 can be thought of as being given away for free. At any point in the range Q_{J_1} to Q_1 , the price is negative in the sense that it would be cheaper to buy Q_1 units than to buy an amount less than Q_1 (but greater than Q_{J_1}).¹⁷⁴
- 5.48 In general, we would not expect a buyer to end up anywhere in the range Q_{J_1} to Q_1 . This means that the implied negative prices are potentially misleading – they may never actually occur in practice.¹⁷⁵

¹⁷³ An alternative way to compare these rebate schemes is to show what the expenditure schedule would look like when inducing a buyer to locate at a particular point. We address this in the first endnote to this chapter.

¹⁷⁴ To put it another way, the closer a buyer is to the target, the more costly it would be for a rival to induce the buyer to forgo the rebate.

¹⁷⁵ We assume that there are no disposal costs, ie: that if a buyer purchases more than it needs, it costs nothing to dispose of or store the unwanted units. The part of the range which creates negative prices but where no buyer is expected to purchase is sometimes described as an 'out of equilibrium' offer, see also Marx and Shaffer (2004) for use of out of equilibrium pricing in rent shifting.

Their existence is to provide a strong incentive for buyers who might otherwise have purchased Q_{J1} units (or thereabouts) to purchase at Q_1 units instead. (The first endnote to this chapter discusses how to 'model' the buyer's decision as regards how much to purchase given a particular expenditure schedule).

Inferences from implied negative prices

- 5.49 A *per se* application of the AKZO rule (that pricing below average variable cost is presumed unlawful) would be inappropriate.
- 5.50 The implied negative prices arise from providing a strong incentive to locate at the target. The important question therefore is not whether there are implied negative prices but whether inducing the buyer to purchase at the target instead of somewhere below the target is anti-competitive or not.
- 5.51 It follows that it is inappropriate to infer that implied negative prices must mean that the scheme is exclusionary and thus even more inappropriate to presume a rollback rebate is anti-competitive.
- 5.52 For example, in the diagram above, the line AZ shows how the appropriate measure of cost increases with each unit purchased.¹⁷⁶ Notice that the expenditure schedule for the rollback scheme in the diagram above *always* lies above cost. Just because certain points along a discount schedule imply negative prices does not necessarily mean that the scheme as a whole implies below cost pricing, particularly where the instances of implied negative prices are very localised. Further, implied negative prices do not imply profit sacrifice since the

¹⁷⁶ We discuss the appropriate measure of cost in our chapter on selective price cuts and argue that avoidable cost is the most useful concept. However, if a different cost concept were used, this does not affect our analysis. The schedule AZ could refer to a different measure of cost.

buyer would not necessarily have been willing to pay the higher prices that apply just before the target.

Why use rollback rebates instead of a 'simple' incremental rebate schemes?

5.53 We now consider some examples of why rollback schemes may sometimes be preferable to a simple incremental rebate scheme for non-exclusionary motives. (By 'simple' incremental rebate scheme we mean the discount always increases as the next target is met.¹⁷⁷ We understand that this is the type of incremental scheme that the CFI and the EC Commission have in mind as being lawful.)

5.54 We consider three examples:

- lowering prices for large buyers
- flexibility to offer highly non linear schemes, and
- inducing buyers to report the true state of demand.

5.55 First, recall that on qualifying for a rollback rebate, the buyer obtains the discount on all units. Rollback rebates are therefore a simple way to offer a lower price to a large buyer than to a smaller buyer. While an incremental rebate can achieve the same relative prices, it would also involve a greater payment to the supplier (because infra marginal units are sold at a higher price). Thus, where the supplier wishes to charge small and large buyers different prices at the margin but where it is not

¹⁷⁷ In principle, an incremental rebate scheme could have ranges where the discount *decreases* as the next target is achieved. For example, a scheme could be such that: for the first 10 units the price is £1; for the next 10 units the price is £9; for the next 10 units the price is £9.50 and for all remaining units the price is £9. A rollback scheme can approximate this effect even though the discount always increases.

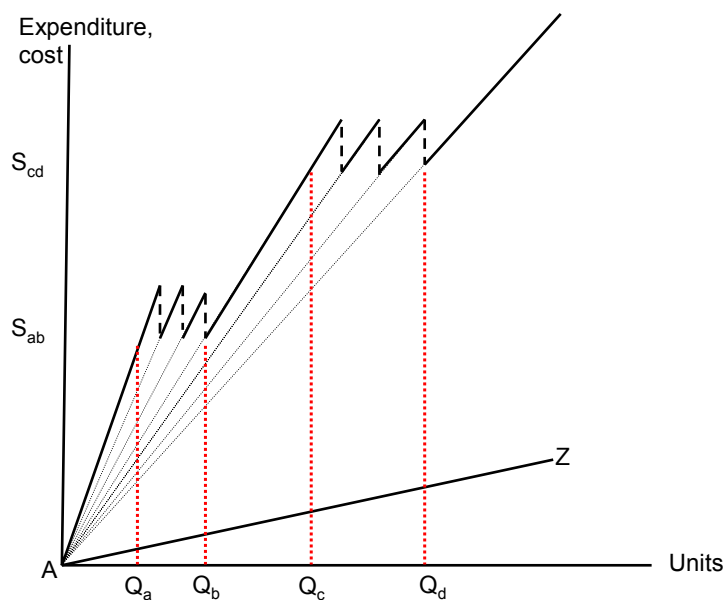
in a strong enough position to extract higher prices on infra marginal units, eg: due to buyer power, a rollback rebate may be used.¹⁷⁸

- 5.56 Second, sliding scale rollback rebate schemes can be designed which are highly non-linear and thereby may offer more flexibility than a simple incremental rebate scheme. An example is presented in the diagram below. Overall, the scheme implies that the supplier always obtains sufficient expenditure to cover the appropriate measure of cost (in that sense, the scheme is above cost). However, there are many ranges within the scheme over which good can be thought of as being sold at below cost. In particular, the ranges Q_a to Q_b and Q_c to Q_d involve 'giving the good away' in the sense that buying Q_b costs as much as buying Q_a and buying Q_d costs as much as buying Q_c .
- 5.57 The scheme will affect incentives. For example, a 'small' buyer that would have bought less than Q_a at the list price might now be incentivised to buy Q_b . A 'large' buyer that might have bought a little less than Q_c had there been no further targets after Q_c , might now purchase Q_d units.

¹⁷⁸ Sometimes when optimal short-term behavior of a firm involves a price cut, the firm prefers to achieve this by a discount rather than lowering its list price because a list price reduction might have more influence on future periods. That is, in a future period where optimality requires raising back the price, ending the discount might be much easier than raising the list price. A rollback rebate could be used to achieve a price cut in this way.

Chart 5.5: Flexibility of 'above cost' sliding scale rollback scheme

Flexibility of 'above cost' sliding scale rollback scheme



- 5.58 Notice that there are three targets in the range Q_a to Q_b . The reason for having many targets could be to provide a form of insurance. Where a buyer faces uncertain demand, it may *expect* to reach Q_b but face a risk of missing the target if demand turns out to be lower than expected. If missing the target meant no discount at all (eg: if the only target was at Q_b and at any amount less than Q_b the list price is charged), this could mean a 'risk averse' buyer would not be incentivised to purchase more.
- 5.59 On the other hand, due to the two targets close to Q_b , missing the target by a little bit does not mean the buyer pays that much more than if it had hit the target. Such 'insurance' could increase the buyer's desire to attempt to sell Q_b units.

- 5.60 After Q_b the schedule rises until we reach another range of strong incentives between Q_c and Q_d . This second range of incentives could be targeted at a different type of buyer. For example, there may be two types of buyers: 'small' and 'large'. The target at Q_b would be aimed at the small buyer and the target at Q_d aimed at the large buyer.¹⁷⁹
- 5.61 Third, instead of two buyers there may be two 'states of demand'. If the supplier sells to a retailer and does not know retail demand conditions, it may wish to encourage the retailer to report the true state of demand (eg: 'high' or 'low'). For example, it could ensure that the discount in the 'high demand state' is high enough to ensure that the buyer is better off buying Q_d units than Q_b units. The supplier may use a rollback scheme *without any exclusionary motives at all* because it is a more profitable way to affect its buyer's incentives.¹⁸⁰

Inferences from the use of rollback schemes

- 5.62 We noted in the previous chapter several reasons why a dominant firm may provide buyers with incentives to buy more of its goods without having an exclusionary motive. Where a rollback rebate is more effective than an incremental rebate scheme as a way to encourage buyers to

¹⁷⁹ It should be noted that an incremental scheme could offer a similar type of discount scheme, including 'insurance' if discounts are not constrained to get larger with each target. The scheme would require a discount of x per cent up to Q_a , a discount of 100 per cent between Q_a and Q_b , a discount of y per cent between Q_b and Q_c , a discount of 100 per cent between Q_c and Q_d , and a discount of z per cent after Q_d , where x per cent < y per cent < z per cent < 100 per cent.

¹⁸⁰ Kolay, Shaffer and Ordovery (2004) demonstrate this by showing that roll-back discounts allow a monopoly to earn profits higher than its profits under the optimal incremental scheme. Exclusion is by assumption not a motive in their setting since there is no threat of entry in the model. The authors also discuss the welfare properties of all units discounts and show that, depending on demand parameters, welfare resulting from an optimal all-units discount contract may be higher or lower compared to welfare under two-part tariffs. This model is described at the first endnote to this chapter.

purchase more, it may be better for competition to permit the rollback rebate. Of course, where rollback rebates are more powerful at affecting incentives, this also means that they may be more effective at achieving anti-competitive outcomes.¹⁸¹

- 5.63 This begs the question of whether there are ways to identify when rollback schemes are unlikely to be harmful; we address this below.

Targeting below cost prices on a range 'open to competition'

- 5.64 Recall the conceptual framework set out in the previous chapter which identified Domco's assured base of sales and the range 'open to competition'. We noted that, where data permit, it is useful to gauge whether below cost prices are targeted in the range open to competition.
- 5.65 To see how below cost prices could be targeted on the range open to competition, consider the following example. Suppose that all buyers would always purchase 100 units from the dominant firm at a price no greater than £10 but thereafter would purchase from the dominant firm only if offered better value than an equally efficient rival (and, say, if the price was no greater than £7). Suppose that a buyer would purchase at most 150 units and the cost of producing each unit (both for the dominant firm and its rival) is £5.
- 5.66 In this simple setting, Domco's 'assured base' is its first 100 units. The remaining 50 units are open to competition.
- 5.67 Both simple incremental discount schemes and rollback schemes can be used to target below cost prices on the range 'open to competition':

¹⁸¹ The fact that firms without market power use rollback schemes indicates that non-exclusionary motivations exist for their use. Of course, this does not mean that the scheme in question is benign.

- in the case of a simple incremental rebate scheme, this could be achieved by setting the list price at £10 and discounted price at £4 for any units bought above a target of 100, and
- in the case of a rollback scheme, list price could be set at £10 and the target could be set at 150 units which, when reached, would give rise to a 20 per cent discount on all units.

5.68 In each example, total expenditure is £1,200 when all 150 units are purchased. Since in both cases the buyer would have bought 100 units at £10 giving rise to revenues of £1,000 the remaining 50 units are in effect sold for £200 and hence below cost.¹⁸²

5.69 In this example, identifying below cost pricing with the incremental rebate scheme is relatively easy. A simple incremental rebate scheme is a fairly blunt instrument for targeting below cost prices – in this case, for any unit purchased above 100 units, the price is below cost. Where the size of the discount increases with each target, once the price falls below cost, it must fall further below cost with each successive target (unless cost also falls with output). Thus cost data may sometimes (although not always) be sufficient to identify below cost pricing with incremental rebate schemes.

5.70 However, identifying below cost pricing in the range open to competition with the rollback discount scheme is harder because this generally requires some knowledge of consumer preferences as well as costs. (Recall our discussion above that implied negative prices are not necessary signs of profit sacrifice as buyers would not necessarily have

¹⁸² In this example Domco's rollback rebate has a target at 150 units, leaving no room for purchases from a rival supplier. Domco could set a target at less than 150 units and foreclose part of the range open to competition with implied prices below cost in that range.

paid the higher prices.) To address this issue, we turn to a possible safe harbour test for rollback rebate schemes.

A safe harbour test for rollback rebate schemes

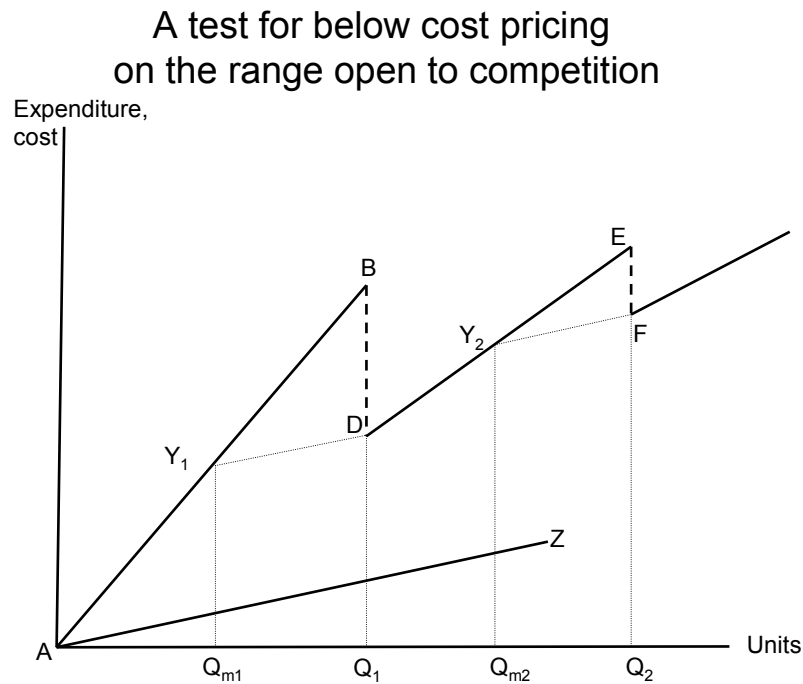
- 5.71 We now develop a safe harbour test. The test seeks to identify when rollback schemes imply prices that are above cost in the range open to competition.¹⁸³
- 5.72 The first test is whether the discount scheme as a whole implies above cost pricing (ie: the expenditure schedule always lies above the appropriate measure of cost schedule which is the line AZ in diagrams above).
- 5.73 Having passed this first test a more difficult question is whether prices are above cost in the 'range open to competition'. Consider the diagram below. Suppose that targets Q_1 and Q_2 below are targeted at a small supplier and a large buyer respectively. Notice that if the small buyer would have bought Q_{m1} units from the dominant firm at the list price, then inducing that buyer to purchase at the target Q_1 makes no extra profit.¹⁸⁴
- 5.74 Thus, **if the small buyer would be locked in to purchasing *at most* Q_{m1} units, then the scheme does not imply below cost pricing over the range of sales where the small buyer has the choice of suppliers.** Similarly, if

¹⁸³ Note that since this safe harbour uses the firm's existing schedule, it also deals with the issue of 'penalty prices'. These were discussed in the previous chapter. A firm may charge a discount on its assured base conditional on the buyer not purchasing from a rival in the range open to competition. If the buyer does purchase from the rival, it must pay a higher price for the dominant firm's assured base, thereby making it harder for the rival to make headway (provided the penalty price is credible).

¹⁸⁴ The slope of Y_1D is the same as AZ and so jumping from Y_1 to D means that incremental revenues equal incremental costs.

the large buyer is locked in to *at most* Q_{m2} units, the scheme does not imply below cost pricing over the range of sales where the large buyer has a choice of suppliers.

Chart 5.6: A test for below cost pricing on the range open to competition



5.75 To capture this, we might define critical ratios for each target: $r_1 = Q_{m1}/Q_1$ and $r_2 = Q_{m2}/Q_2$. If our evidence suggests that the scheme is profitable overall and that the dominant supplier's 'assured base of sales' with the relevant buyer(s) is less than the relevant critical ratio, this would suggest that the rollback scheme is unlikely to harm competition

because prices on the range open to competition are not below the appropriate measure of cost.¹⁸⁵

Application of the safe harbour test in practice

5.76 We present this test as a *conceptual framework*. At times it will be helpful in practice to identify schemes which do *not* harm competition. The test would be applied as follows:

- for a given type of buyer (note, there may be several types) identify the critical ratio for each target (this requires some knowledge of the avoidable cost of production, although an upper bound for costs may be sufficient)
- consider whether it is feasible that the supplier's assured base of sales with that buyer type is such that the expenditure schedule implies below cost pricing on the range of sales open to competition (ie: is it most unlikely that the assured base exceeds the critical ratio for any of the targets?), and
- if foreclosure is not feasible because there are insufficient buyers for which the schedule implies below cost pricing on the range of sales open to competition, dismiss the case.

5.77 We acknowledge that in practice, it would be difficult to identify the assured base of sales precisely. However, where we can be confident

¹⁸⁵ It may be that the rival supplier could not match the dominant firm's avoidable cost in the range open to competition, perhaps because the range open to competition is too small to allow the rival to benefit from the same economies of scale. However, for the reasons discussed in the previous chapter, intervention would not usually be desirable as it would be to protect a less efficient competitor. An exception could be where there was very strong evidence that the dominant firm was denying its rivals the opportunity to obtain an efficient scale and thereby protecting its assured base of sales.

that we are over-estimating the size of the assured base and that the appropriate measure of cost is not sensitive to the choice of the assured base, this test may be used (see previous chapter for a discussion of potentially relevant evidence). Further, the test would seem more appropriate where targets are not very close to each other and so it is more likely that the targets are designed for different types of buyers.

- 5.78 We apply this test to one of the rollback rebate schemes found to be unlawful in *Michelin II* (see second endnote to this chapter). There we demonstrate that it is unlikely that the discount scheme led to below cost pricing in the range of sales open to competition, given our assumption that costs were no greater than 85 per cent of the list price.
- 5.79 Notice that this test allows us to dismiss cases – it provides a safe harbour. However, 'failing' the test is not sufficient evidence that there is harm to competition and consumers. Further investigation along the lines set out in the previous chapter would be required.

Inconsistent presumptions

- 5.80 Finally, we note that to have a presumption that rollback rebates are unlawful and that incremental rebates are lawful will be inconsistent in certain situations. In particular, where the rollback scheme involves only very small increments in the discount as each new target is reached, a simple incremental scheme will be approximately the same as a rollback rebate scheme offering the same discounts.
- 5.81 For example, consider a scheme objected to in *Michelin II* (at paragraph 69). We note in the table below that had the discounts been applied incrementally rather than on all units, the overall discounts (measured in terms of average expenditure per unit) would be similar once the target level exceeds 240,000 francs. In fact, the overall discounts are not that different even below that level (apart from at the first target).

Table 5.7: Comparing rollback and expenditure rebates in Michelin II

Target turnover (francs)	Discount as % of list price	Expenditure at target (rollback)	Expenditure at target (incremental)	Ave expenditure per unit (rollback), % of list price	Ave expenditure per unit (incremental), % of list price	Difference
9,000	7.50%	8,325	9,000	92.5%	100.0%	7.5%
15,000	8.50%	13,725	14,490	91.5%	96.6%	5.1%
25,000	9.00%	22,750	23,590	91.0%	94.4%	3.4%
30,000	9.25%	27,225	28,128	90.8%	93.8%	3.0%
35,000	9.50%	31,675	32,653	90.5%	93.3%	2.8%
45,000	9.85%	40,568	41,668	90.2%	92.6%	2.4%
60,000	10.00%	54,000	55,168	90.0%	91.9%	1.9%
80,000	10.10%	71,920	73,148	89.9%	91.4%	1.5%
100,000	10.20%	89,800	91,108	89.8%	91.1%	1.3%
118,000	10.35%	105,787	107,245	89.7%	90.9%	1.2%
142,000	10.50%	127,090	128,725	89.5%	90.7%	1.2%
172,000	10.65%	153,682	155,530	89.4%	90.4%	1.1%
241,000	10.75%	215,093	217,112	89.3%	90.1%	0.8%
492,000	10.85%	438,618	440,879	89.2%	89.6%	0.5%
757,000	10.95%	674,109	676,861	89.1%	89.4%	0.4%
1,030,000	11.05%	916,185	919,695	89.0%	89.3%	0.3%
1,306,000	11.15%	1,160,381	1,164,921	88.9%	89.2%	0.3%
1,656,000	11.25%	1,469,700	1,475,546	88.8%	89.1%	0.4%
2,100,000	11.35%	1,861,650	1,869,152	88.7%	89.0%	0.4%
2,663,000	11.45%	2,358,087	2,367,688	88.6%	88.9%	0.4%
3,376,000	11.55%	2,986,072	2,998,337	88.5%	88.8%	0.4%
4,280,000	11.65%	3,781,380	3,797,021	88.4%	88.7%	0.4%
5,136,000	11.75%	4,532,520	4,552,441	88.3%	88.6%	0.4%
5,855,000	11.85%	5,161,183	5,186,239	88.2%	88.6%	0.4%
6,242,000	11.90%	5,499,202	5,527,186	88.1%	88.5%	0.4%
6,604,000	11.95%	5,814,822	5,845,927	88.1%	88.5%	0.5%
6,934,000	12.00%	6,101,920	6,136,327	88.0%	88.5%	0.5%
7,280,000	12.05%	6,402,760	6,440,634	88.0%	88.5%	0.5%
7,640,000	12.10%	6,715,560	6,757,074	87.9%	88.4%	0.5%
8,020,000	12.15%	7,045,570	7,090,904	87.9%	88.4%	0.6%
8,415,000	12.20%	7,388,370	7,437,714	87.8%	88.4%	0.6%
8,830,000	12.25%	7,748,325	7,801,877	87.8%	88.4%	0.6%
9,260,000	12.30%	8,121,020	8,178,987	87.7%	88.3%	0.6%
9,710,000	12.35%	8,510,815	8,573,412	87.7%	88.3%	0.6%
10,180,000	12.40%	8,917,680	8,985,132	87.6%	88.3%	0.7%
10,660,000	12.45%	9,332,830	9,405,372	87.6%	88.2%	0.7%
11,170,000	12.50%	9,773,750	9,851,622	87.5%	88.2%	0.7%
11,730,000	12.55%	10,257,885	10,341,342	87.5%	88.2%	0.7%
12,520,000	12.60%	10,942,480	11,031,802	87.4%	88.1%	0.7%
13,380,000	12.65%	11,687,430	11,783,012	87.4%	88.1%	0.7%
14,314,000	12.70%	12,496,122	12,598,394	87.3%	88.0%	0.7%
15,314,000	12.75%	13,361,465	13,470,894	87.3%	88.0%	0.7%
16,385,000	12.80%	14,287,720	14,404,806	87.2%	87.9%	0.7%
17,532,000	12.85%	15,279,138	15,404,416	87.2%	87.9%	0.7%
18,792,000	12.90%	16,367,832	16,501,876	87.1%	87.8%	0.7%
20,145,000	12.95%	17,536,223	17,679,663	87.1%	87.8%	0.7%
22,000,000	13.00%	19,140,000	19,293,513	87.0%	87.7%	0.7%

Efficiencies

5.82 The CFI refers to quantity discounts noting that they potentially have an 'economically justified countervailing advantage' (eg: paragraph 59). It is not entirely clear what this means. It would certainly include economies of scale but it may also include rewarding activities that grow the market as suggested at paragraph 100: *'justified by the volume of business they*

bring or by any economies of scale they allow the supplier to make' (emphasis added).

- 5.83 There would appear to be a view in the *Michelin II* judgment held by the CFI and the EC Commission that discount schemes should accurately reflect the underlying *cost* savings.¹⁸⁶ For example, where there are economies of scale, volume discounts are assumed to reflect the idea that larger buyers allow the supplier to gain greater economies than smaller buyers. However, as noted by Ridyard (2003), this approach is too simplistic.
- 5.84 First, the essential business justification for selective price cuts and rebates is simple – selling more at prices which increase profits. A firm may be reluctant to offer a lower price on *all* sales simply because to do so would lower profits. However, where lower prices (but still above incremental cost) can be targeted on incremental units, this allows the supplier to sell more without harming revenues on other units sold.¹⁸⁷ Usually this is entirely consistent with effective competition. Whether a firm was dominant or not, this same incentive would exist.
- 5.85 Second, where economies of scale exist, lower prices often cannot be linked to cost efficiencies generated. For example, suppose that there is a fixed cost of production and thereafter the marginal cost of production is constant. This means that once the first unit has been produced, the

¹⁸⁶ In addition, see European Commission contribution to OECD roundtable on rebates: 'Usually, quantity discounts are not considered to generate competition problems on the assumption that they are justified by cost savings and cost efficiencies directly flowing from the purchase in question'. The OECD Roundtable documents are published under the title 'Loyalty and Fidelity Rebates', DAFFE/COMP(2002)21, 4 February 2003 (www.oecd.org/dataoecd/18/27/2493106.pdf).

¹⁸⁷ This argument does not apply so well in the case of rollback rebates. Efficiency considerations for rollback rebates are discussed above.

cost of serving a smaller or a larger buyer is identical. Once the fixed cost has been incurred, there is no cost based reason for deciding that a large buyer should *necessarily* have a lower price.

- 5.86 Third, economic theory indicates that where economies of scale exist, the price that buyers pay depends on several factors such as: whether prices are bargained and the nature of the bargain;¹⁸⁸ whether the supplier can price discriminate between buyers and if so whether buyers have different elasticities of demand;¹⁸⁹ and the order in which deals are struck.¹⁹⁰
- 5.87 Fourth, in the absence of economies of scale, discounts may be employed in intermediate markets to reward buyers for promoting the seller's product and/or for growing the market and/or revealing information about the state of demand.

¹⁸⁸ Raskovich (2003) considers bargains over the incremental surplus created by the deal being completed (taking other deals as being agreed at equilibrium outcomes). If the large buyer is 'pivotal' in the sense that no production would take place without it purchasing from the supplier, it may end up paying a higher price than other buyers as it must contribute to the supplier's fixed costs of production. The implication is that just because striking a deal with a large buyer is important to an investment being made, this does not necessarily give that buyer the leverage to obtain a larger discount than a smaller buyer. It depends on the shape of the 'gross surplus' function. Similarly, see Inderst and Wey (2003). The implication of their paper is that where increasing returns to scale mean that the 'incremental surplus' is increasing in output, smaller buyers obtain larger discounts because (taking other bargains as already being struck) their bargains relate to a higher 'incremental surplus'.

¹⁸⁹ This is the familiar idea that where a supplier can set prices, it charges higher mark ups to price insensitive customers.

¹⁹⁰ Suppose that the more a supplier produces, the lower its costs. If deals are struck sequentially then the contribution to the supplier's cost efficiency depends upon the order in which deals are struck. Where deals are not struck sequentially (or where it does not make sense to think of deals as being struck this way) there is no obvious way of deciding which buyer caused which 'efficiency' benefit. Ridyard calls this an 'interdeterminacy problem'.

- 5.88 In this regard, it is interesting to note that the CFI also objects to the Friends club scheme (paragraph 212) which allows customers to obtain a discount in return for certain obligations such as: promoting Michelin's brand; being trained by Michelin; and providing financial information (paragraph 172). As regards the provision of information, the CFI states: '[Michelin's] sole aim in imposing on dealers obligations to communicate detailed information on turnover, statistics and sales forecasts, future strategies and the development of Michelin market shares is to obtain information about the market which is not public and which is of value for carrying out of its own marketing strategy' (paragraph 219).
- 5.89 While it is possible that Michelin's Friend's club scheme was used anti-competitively, the possible efficiencies associated with discounts in return for buyer commitments should also be acknowledged. In many cases, retailers will be more aware of demand conditions than their suppliers because the retailers are the interface with final consumers. If discounts are used to reward buyers for revealing such information and such information allows Michelin to market its product more effectively, this could enhance competition and grow the market. Of course, the information could be used strategically by Michelin with anti-competitive effect, but such harm should be demonstrated and not simply asserted.
- 5.90 Would these *demand* considerations be considered an 'economically justified countervailing advantage' of using a discount scheme?¹⁹¹

¹⁹¹ The CFI does not discuss whether it is desirable to weigh up pro-competitive and anti-competitive effects (this was not an issue as Michelin did not give evidence to justify its discount scheme (paragraph 108)).

5.91 This is an important area where more clarification would be useful. First, why should dominant firms always have to justify their discounts? Second, on what basis would identifiable cost savings be the only legitimate justification for discounting practices when demand considerations are equally important?¹⁹²

Uncertainty and unfairness

5.92 Although it is stated that 'conduct will be regarded as abusive only if it restricts competition' (paragraph 237), the CFI would appear to discuss unfairness as if it were an abuse. The CFI considers that loyalty rebates are linked closely to unfairness (paragraph 66). The CFI also considers that where a supplier has considerable discretion over the final discount, this almost inevitably leads to discrimination (145) and is unfair and thereby constitutes an abuse (141). The CFI seems to argue that discretion is unfair because it leads to uncertainty for the buyer.

5.93 However, supplier (and buyer) discretion is an inevitable part of most business interactions.

5.94 First, discretion is necessary due to the fact that most contracts are 'incomplete'. By incomplete, we mean that (a) it is not possible (or profitable) to write contracts so specific that they cover every possible contingency or (b) that many contingencies are not verifiable and hence not enforceable by a court. In such cases discretion is inevitable and

¹⁹² See case C-163/99, Portugal v. Commission, ECR I-2613 [2001] where the Commission stated that discounts offered by a dominant firm 'must, however, be justified on objective grounds, that is to say, they should enable the undertaking in question to make economies of scale' (para.49).

desirable. Both suppliers and buyers will have some discretion as to how they abide by the terms of any contract.¹⁹³

- 5.95 Second, where discretion relates to whether the discount will be awarded or not, this lowers the *expected* discount. In this sense supplier discretion may weaken a buyer's incentives to reach a target since, having got there, the discount is not guaranteed.¹⁹⁴
- 5.96 Third, while offering a discount that is not conditional on reaching a certain level of purchases is less likely to be loyalty inducing, it is also less likely to have any impact on encouraging the buyer to spend any effort to purchase more. Thus, if all discounts have to be certain to avoid scrutiny, they lose their potentially pro-competitive role.
- 5.97 For example, uncertainty affects not only buyers but suppliers too. Where suppliers cannot monitor retailer efforts to promote a good, offering a discount for reaching a target may well be a simple and effective mechanism to retailer encourage promotional effort.

¹⁹³ Consider an analogy. Suppose at a performance review an employee did not meet the objectives agreed six months prior because of a major unforeseen event. However, that member of staff performed exceptionally well in dealing with the unforeseen circumstances to the financial advantage of the employer. An employer with discretion would award the employee a good bonus. An employer without discretion would award a low bonus on the basis that the objectives had not been met. If the employee knew that the employer had no ex post discretion to change the performance objectives, he or she would have sought to meet the agreed performance objectives instead of responding effectively to the major event.

¹⁹⁴ Of course, this fact can be exploited by the dominant firm. Domco may influence the buyer's *expectations*, for example by threatening to withdraw part of a discount that the buyer is accustomed to in the event that the buyer purchases more from the rival or promotes the rival's product.

5.98 A main theme of this report is that the key issue is whether a practice harms competition and consumers. 'Unfairness' and 'uncertainty' are not helpful principles for determining abuse.¹⁹⁵

Concluding remarks

- 5.99 In this chapter we assessed the extent to which economics principles support the case law for what is a lawful discount.
- 5.100 We argued that there is no simple relationship between the length of the reference period and the likelihood of anti-competitive behaviour and that the nature of stochastic (ie: volatile) demand is particularly important to assess. We highlighted other issues to consider which specifically relate to the reference period. Ultimately, however, the potential foreclosure effect of a discount scheme should be assessed in the round, ie: according to the framework suggested in the previous chapters.
- 5.101 We then considered rollback rebates. In *Michelin II*, the CFI indicated that 'loyalty inducing' rollback discounts were *per se* abusive. This negative presumption appears to be derived from a view that implied 'negative prices' arising from the 'saw tooth' effect of rollback rebates must be harmful. We have showed that this presumption is not justified on economic principles.
- 5.102 Implied negative prices are a feature of providing stronger incentives to purchase at the target but are not necessarily a sign of profit sacrifice or exclusionary behaviour. As we noted in the previous chapter, there are several reasons why a dominant firm may provide buyers with incentives to buy more of its goods without having an exclusionary motive. In this

¹⁹⁵ This is not to argue that uncertainty and asymmetric information are unimportant issues in economics. Instead, it is to make the point that uncertainty is a feature of almost every real life contract and so cannot be a principle on which to pin abusive behaviour.

chapter we provided examples of non-exclusionary motives for using rollback rebates.

- 5.103 When used for beneficial reasons a rollback rebate may be better for consumers than an incremental rebate – because it can provide more powerful incentives. On the other hand, when used for ill, rollback rebates may well be more harmful than an incremental rebate.
- 5.104 This demonstrates that there should be no presumption that rollback rebates are harmful. There are no strong reasons to believe that a rollback rebate employed by a dominant firm would more often be harmful than pro-competitive. In addition, we have suggested safe harbours which indicate when rollback schemes are unlikely to harm competition.
- 5.105 The *Michelin II* (and *Virgin/BA*) judgments require the dominant firm to provide a positive pro-competitive rationale for the rebates, to get them out of the negative presumption that has (mistakenly) been attached to the rebate forms. We are not in favour of this kind of 'Article 82(3)' approach (as we discussed in the previous chapter).
- 5.106 In general, dominant firms should not have to justify their discounts. Low prices are generally to be encouraged and the pervasive use of discounts by firms without market power should demonstrate that there are several non-exclusionary motives for using discount schemes. In general, the burden should be on the authorities to show why the discount is a cause for concern – this includes fidelity rebates, even where they involve rollback schemes.
- 5.107 Further, we noted several reasons why linking cost savings directly to discounts is not desirable. We also noted the importance of discounts to generate demand side incentives – a consideration of efficiencies should not be limited only to the issue of whether costs are lower.
- 5.108 Finally we noted that the key issue is whether a practice harms competition and consumers. 'Unfairness' and 'uncertainty' are not helpful economic principles for determining abuse.

Endnote one: Key points from Kolay, Shaffer, Ordover (2004): All-units Discounts in Retail Contracts¹⁹⁶

5.109 In this end note we discuss Kolay, Shaffer and Ordover (2004). This is one of the few papers in the economics literature to compare 'simple' incremental and rollback rebate schemes. It is useful to demonstrate:

- the existence of non-exclusionary motives for using rollback rebate schemes, and
- how to model the buyer's purchase decision in relation to the expenditure schedules described in the main text.

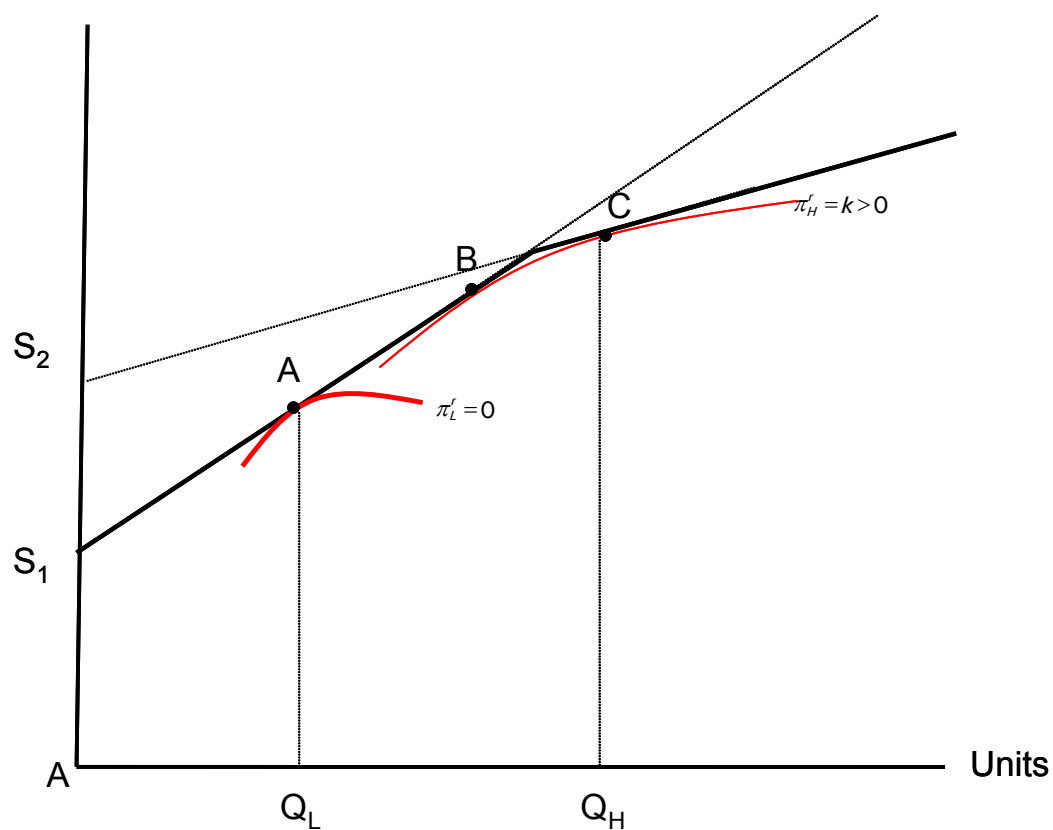
5.110 Consider a monopolist selling into a market with a stochastic demand through retailers (there are no exclusionary motives as we have rivals and no scope for entry by assumption).

5.111 We assume that the retailers can observe the state of the demand which can be high or low, but the monopolist can not. Let the total profit of the integrated structure be maximized at Q_L when demand is low and at Q_H when demand is high. In order to lessen double marginalization and to extract monopoly rents better the monopolist may choose to offer a menu of two part tariffs. In this situation, the monopolist's optimal two-part tariff menu is not sufficient to extract all rents from the retailer. The private information of the retailer means that it can opt for the schedule designed for the low demand case when the demand is actually high.

¹⁹⁶ Kolay S., Shaffer G., Ordover J. A., 2004, 'All-units Discounts in Retail Contracts', *Journal of Economics & Management Science*, 13, pp. 429-459.

5.112 The informational advantage is the source of the rents that the retailer earns when the demand is high. These rents are lower than what the supplier loses due to the sub-optimal volume chosen by the retailer for high demand. Therefore, the retailer must be induced to report the true state by a financial reward. The optimal contract for the monopolist is as shown in the following diagram.

Chart 5.8: Expenditure



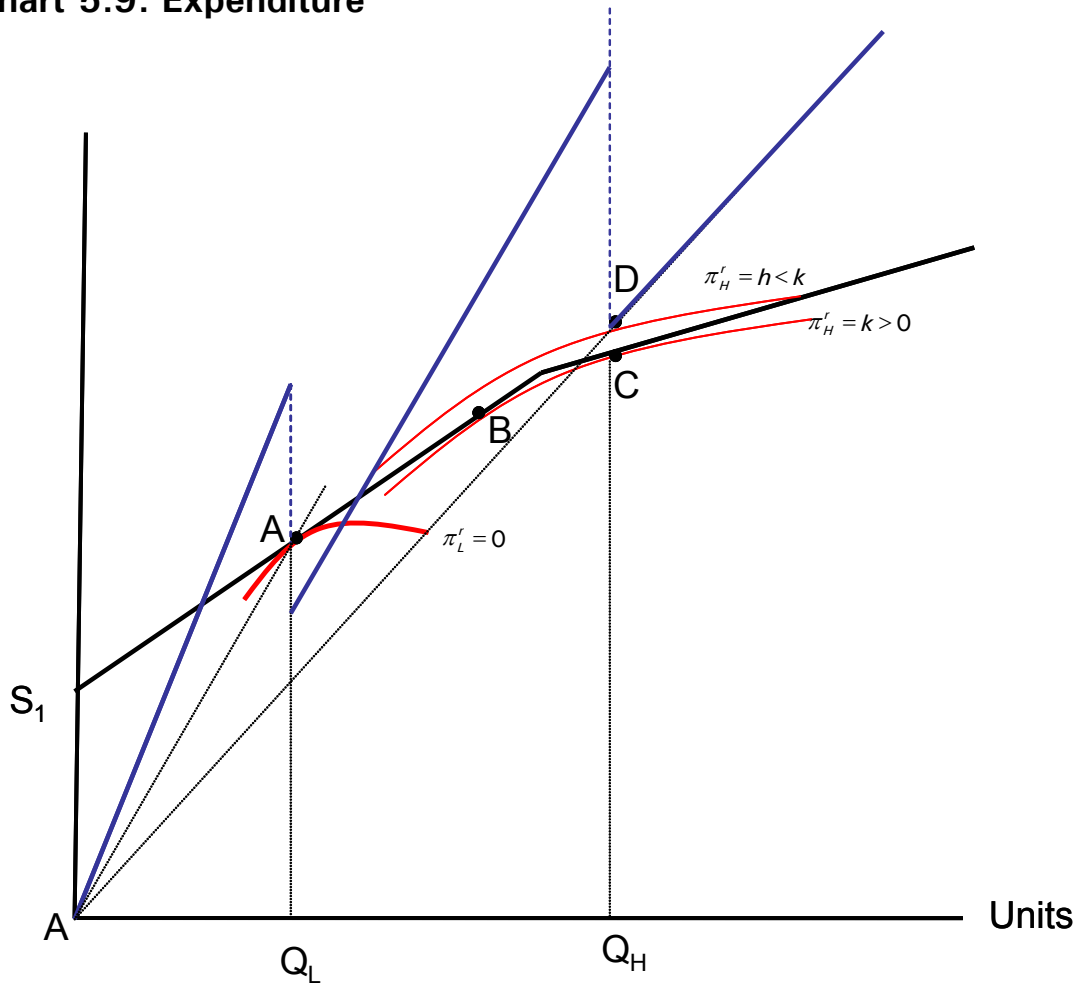
- 5.113 Schedule S_1 is directed to low demand retailer and schedule S_2 is directed to high demand one. The 'inverted U' shaped curves represent the retailer's isoprofit curves at two states of demand.¹⁹⁷
- 5.114 When demand is low, the relevant isoprofit curve is the first (the thicker line). At Point A, the retailer is indifferent between 'buying' and 'not buying' (ie: in either case, the retailer earns zero profit).
- 5.115 When demand is high, the relevant isoprofit curve is the second (the thinner line). Suppose that the buyer just prefers point C to point B. The monopolist is unable to increase further the revenues from the retailer in the high demand state because if the schedule S_2C is shifted upwards the buyer will prefer to locate at point B which is (from the monopolist's point of view) less desirable.¹⁹⁸
- 5.116 This is because the buyer chooses to locate on the 'lower envelope' of the menu of two-part tariffs offered by the supplier – this lower envelope (depicted by the thick line from S_1 through A, B and C) is in effect an incremental discount scheme.

¹⁹⁷ The 'inverted U' shape of the isoprofit curves can be explained as follows. Buyers use the monopolist's good as an input to producing a final product for which the price is given. Their production technology exhibits increasing returns to scale up to the peak of the isoprofit curve and then diminishing returns thereafter.

¹⁹⁸ For simplification, the marginal costs for the monopolist are assumed to be zero.

5.117 If the monopolist uses a rollback discount scheme then it will be able to extract more rents from the retailer without distorting the quantity choices. The main feature of such a scheme is that it allows the monopolist to make quantities other than Q_H less attractive for the buyer in the high demand state (allowing the monopolist to extract a little more from the buyer) *without* distorting the choice of the buyer in the low demand state.¹⁹⁹

Chart 5.9: Expenditure

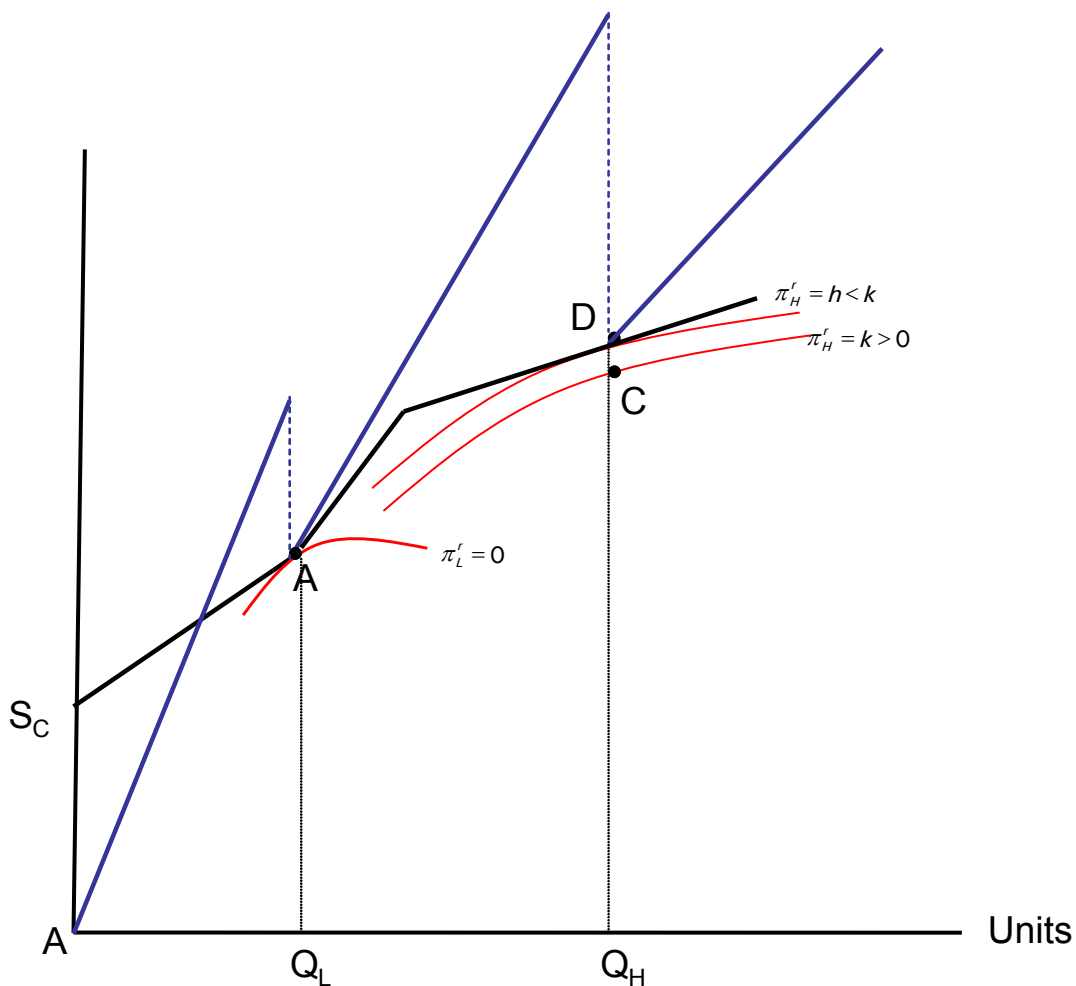


¹⁹⁹ In contrast, to make Q_H the optimal choice in the high demand state with an incremental rebate scheme would mean distorting buyer's choice in the low demand state.

5.118 This is shown by the diagram. At point D the retailer is on a less profitable isoprofit curve than at point C. However, given the all-units discount schedule there is no quantity lower than Q_H that allows him to earn higher profits (ie: locate on an isoprofit curve that offers greater profits).

5.119 It is worth noting that Kolay, Shaffer and Ordovery's result that an all units discount offers more flexibility than a continuous price schedule relies on the use of a 'simple' incremental discount scheme where the discount is larger at successive targets. However, where the discount can fall after a point, a continuous discount schedule offers similar flexibility to the all units discount scheme. This is shown below.

Chart 5.10: Expenditure



5.120 By charging a higher price for some of the units following Q_L the monopolist manages to make the quantities below Q_H unattractive for high demand retailer. Thus, the continuous schedule S_c can replicate the result under the all-units discount. (In fact, the same could be achieved by offering the retailer to choose between points A and D only. This would allow the monopolist to extract higher rents from the retailer in the high demand state while continuing to extract all rents in the low demand state).

Endnote two: Application of safe harbour test to Michelin II

- 5.121 In this endnote, we provide an example of how our 'safe harbour test' can be applied to a discount scheme found to infringe Article 82 in *Michelin II*.
- 5.122 Suppose that Michelin through its dominance has an assured base of sales that means that it would be very confident in accounting for at least x per cent of a certain buyer's needs. This means that the remaining $(1-x)$ per cent is 'open to competition' as far as that buyer is concerned.
- 5.123 The following table calculates the point after which further units sold up to the next target are priced at cost, given a range of cost assumptions (ie: these are the critical ratios r_1, r_2 , etc for each target as described above). To calculate these critical points we test four assumptions: cost is 40 per cent of the list price; 60 per cent; 80 per cent and 85 per cent. Each column refers to a particular cost assumption. For example 87.5 per cent in the top row means that, when cost is 40 per cent of the list price, the firm reaches the profit level earned from the customer at the target of 9000 by making 87.5 per cent of the target sales at list prices. Consider that the customer expects to sell a volume that is 9000 worth at the list price.²⁰⁰

²⁰⁰ The power of any scheme is maximum when the buyer expects to end up exactly at the target.

- 5.124 If the assured base of sales to the customer is more than 87.5 per cent of the customer's business then the firm is losing money when the customer makes the target sales rather than the assured sales. Then, equally efficient rivals would need to make losses if they intended to capture the business between the assured base and the target level. On the contrary, if assured base would be less than 87.5 per cent the rivals can profitably compete for the share of the customer's business that is open to competition.
- 5.125 Notice that the critical ratio is above 85 per cent for all targets but the first. This suggests that unless Michelin was assured of selling 85 per cent (which would seem to be substantially above Michelin's market share)²⁰¹ of the volumes of its most important buyers, it is most unlikely that it priced below cost (given our cost assumptions that cost was no more than 85 per cent of the list price) in the range of sales open to competition.

²⁰¹ Michelin's market share was around 55 per cent (compared to eight per cent for the next largest supplier). We understand (based on a presentation by Jean-Francois Bellis, AmCham EU Annual Competition Conference, 31 May 2005) that in around 20 years prior to the infringement decision Michelin's market share was around 85 per cent falling to around 65 per cent a decade later and then to 55 per cent by the time of the decision. Throughout this time, it had a similar rollback scheme in place. This finding in itself is evidence against the scheme harming competition.

Table 5.11: Break even point as percentage of target for given cost as percentage of price list

Break even point as % of target for given cost as % of list price				
Target turnover	Cost at 40% of list price	Cost at 60% of list price	Cost at 80% of list price	Cost at 85% of list price
9,000	87.5%	81.3%	62.5%	50.0%
15,000	98.1%	96.9%	92.0%	86.7%
25,000	99.0%	98.4%	95.7%	92.3%
30,000	99.5%	99.2%	97.7%	95.8%
35,000	99.5%	99.2%	97.7%	95.7%
45,000	99.3%	98.9%	96.7%	93.6%
60,000	99.7%	99.5%	98.5%	97.1%
80,000	99.8%	99.7%	99.0%	98.0%
100,000	99.8%	99.7%	99.0%	98.0%
118,000	99.7%	99.5%	98.5%	96.9%
142,000	99.7%	99.5%	98.4%	96.8%
172,000	99.7%	99.5%	98.4%	96.7%
241,000	99.8%	99.7%	98.9%	97.7%
492,000	99.8%	99.7%	98.9%	97.6%
757,000	99.8%	99.7%	98.9%	97.6%
1,030,000	99.8%	99.7%	98.9%	97.5%
1,306,000	99.8%	99.7%	98.9%	97.5%
1,656,000	99.8%	99.7%	98.9%	97.4%
2,100,000	99.8%	99.7%	98.9%	97.3%
2,663,000	99.8%	99.7%	98.8%	97.3%
3,376,000	99.8%	99.6%	98.8%	97.2%
4,280,000	99.8%	99.6%	98.8%	97.1%
5,136,000	99.8%	99.6%	98.8%	97.0%
5,855,000	99.8%	99.6%	98.8%	96.9%
6,242,000	99.9%	99.8%	99.4%	98.4%
6,604,000	99.9%	99.8%	99.4%	98.4%
6,934,000	99.9%	99.8%	99.4%	98.4%
7,280,000	99.9%	99.8%	99.4%	98.3%
7,640,000	99.9%	99.8%	99.4%	98.3%
8,020,000	99.9%	99.8%	99.4%	98.3%
8,415,000	99.9%	99.8%	99.4%	98.2%
8,830,000	99.9%	99.8%	99.4%	98.2%
9,260,000	99.9%	99.8%	99.4%	98.2%
9,710,000	99.9%	99.8%	99.4%	98.1%
10,180,000	99.9%	99.8%	99.3%	98.1%
10,660,000	99.9%	99.8%	99.3%	98.1%
11,170,000	99.9%	99.8%	99.3%	98.0%
11,730,000	99.9%	99.8%	99.3%	98.0%
12,520,000	99.9%	99.8%	99.3%	98.0%
13,380,000	99.9%	99.8%	99.3%	97.9%
14,314,000	99.9%	99.8%	99.3%	97.9%
15,314,000	99.9%	99.8%	99.3%	97.8%
16,385,000	99.9%	99.8%	99.3%	97.8%
17,532,000	99.9%	99.8%	99.3%	97.7%
18,792,000	99.9%	99.8%	99.3%	97.7%
20,145,000	99.9%	99.8%	99.3%	97.6%
22,000,000	99.9%	99.8%	99.3%	97.6%