Avoiding Error in the
Antitrust Analysis of Unilateral Refusals to Deal
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I. Basic Economic Framework

1. This statement will discuss alternative legal standards to govern unilateral refusals to deal by vertically integrated firms under Section 2 of the Sherman Act. The same analysis would apply to an integrated firm that sells a "system" of complementary products and refuses to sell one of the complementary products on an unbundled basis to a competitor that produces the other complementary product. This analysis also has direct implications for situations where an unintegrated firm induces independent suppliers to refuse to deal with its competitors.
2. Before getting to unilateral conduct, I want to start by briefly discussing *concerted* refusals to deal that are governed by Section 1. This is a useful exercise because concerted refusals to deal are less controversial. Therefore, analysis of concerted refusals to deal can help to distinguish disagreements over economic analysis from disagreements over Section 2 legal policy.
    a. *JTC Petroleum* involved a concerted refusal to deal in the context of a naked price fixing agreement. The defendant, Piasa, allegedly was colluding with other highway contractors that applied asphalt. As interpreted favorably towards the plaintiff by Judge Posner, JTC was a maverick competitor that apparently was disrupting the "applicator" cartel. In response, Piasa and the other cartel members allegedly induced several asphalt suppliers to refuse to deal with JTC. This left JTC with more distant and less cost-effective asphalt

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suppliers. The fundamental economics of this refusal to deal are simple. JTC's input (i.e., asphalt) costs were raised as a consequence of an agreement among competitors, which in turn permitted the cartel better to maintain a supra-competitive output (i.e., applicator) price. There were no plausible efficiency benefits.

b. *Visa* involved a concerted refusal by two network joint ventures with highly overlapping memberships. Visa and MasterCard each promulgated operating rules that prevented its member banks from issuing credit cards of competitive card networks, notably American Express and Discover Card. By restricting network competitors from attracting the large card-issuing banks, the defendants were able to maintain their market power in the provision of credit card network services. In this case, the input was the card issuing services and the output was network services. The Second Circuit rejected the proffered justifications.

c. *Toys-R-Us* involved a concerted refusal to deal by toy manufacturers that was orchestrated by the defendant retail chain against its competitors who sold toys in club stores." By withholding popular toys from these retail competitors and inducing the manufacturers to charge higher wholesale prices for toys that they did supply, the defendant chain was able to maintain market power in the retail sales of toys. By raising the victims' costs of obtaining a critical input (i.e., popular toys at wholesale), the defendant was able to maintain market power in the output market (i.e., retail toys). Unlike the other cases, there was only a single downstream competitor who gained market power.

3. Unilateral refusals to deal are like *Toys-R-Us* in that there is only a single downstream competitor. But, they differ from *Toys-R-Us* in that the defendant is vertically integrated. It withholds an input it produces itself, rather than inducing one or more input suppliers to refuse to deal with its competitors, as in the case of vertical agreements that induce refusals to deal by input suppliers. (I discuss these agreements in detail in my draft article.) The basic economic forces are the same, whether the defendant is integrated or whether it agrees with one or more independent input suppliers. By withholding a critical input, the refusal to deal raises the cost of downstream competitors and permits the defendant to achieve, maintain or enhance market power in the output market. In addition, refusals to deal might permit the vertically integrated firm to maintain market or monopoly power in the input market or achieve or maintain market power in some related output market.[2]

4. It sometimes is argued that incentives for unilateral refusals to deal are fundamentally different from coordinated refusals because the integrated firm can capture the entire monopoly profit by selling its input to competitors at the monopoly price. The single monopoly profit ("SMP") theory claims that every refusal to deal must be efficient

[2] I generally will use the terms "market" and "monopoly" power interchangeably in this statement. Monopoly and market power are qualitatively the same, but monopoly power involves a relatively larger degree of market power.

because the firm was already extracting all the monopoly profits and so the refusal to deal had no use in increasing monopoly power.

5. Although the SMP result applies in one stylized economic model, economists now know that the SMP theory does *not* hold in the absence of a number of strong and limiting theoretical conditions that do not apply to most real world markets. The SMP does not hold in the following conditions: (i) the input market is regulated but the output market is unregulated; (ii) there is some limited actual or potential competition in the input market, rather than the integrated firm having a protected monopoly; (iii) there is a related market in which the integrated firm and the victim of the refusal to deal (or its customers or partners) compete as actual or potential competitors; (iv) the defendant is unable to price discriminate; (v) the production technology is not fixed proportions in all inputs.

6. These broad exceptions to the SMP theory also imply a number of reasons why the integrated firm may have an anticompetitive incentive to refuse to deal and why the refusal could lead to anticompetitive effects.

    a. *Regulated Market:* The integrated firm may have the incentive to refuse to sell the input at the regulated price in order to extract profits in the unregulated output market.

    b. *Actual Input Market Competition:* If the integrated firm is a dominant firm or oligopolist in the input market, instead of having a protected monopoly, then refusing to deal with unintegrated competitors may "soften" input market competition, which may facilitate its input market competitors' ability and incentive to raise their own input prices. This "umbrella pricing" effect in the input market may lead to higher prices in the output market.

    c. *Potential Input Market Competition:* The defendant may use a refusal to deal to raise entry barriers into the input market facing the unintegrated competitors, thereby protecting its dominance of the input market. This effect sometimes is called the "2-level entry" theory.

    d. *Related Output Market Competition:* The integrated firm may refuse to deal in order to raise barriers to competition in a related output market in order to achieve or maintain market or monopoly power in that market.

    e. *Constraints on Price Discrimination:* If the integrated firm is unable to price discriminate against the unintegrated competitor because of constraints such as the potential for arbitrage or regulation, the integrated firm may refuse to deal as a second-best policy. This refusal to deal may harm consumers by leading to higher prices.

    f. *Lack of Fixed Proportions:* Unlike the others, lack of fixed proportions in production is not by itself a key driver of anticompetitive refusals to deal.

7. Economic analysis can be used to identify situations where the refusal to deal is associated with one or more of these potential anticompetitive incentives and where the refusal to deal has a likely anticompetitive effect on consumers. That analysis also would evaluate the potential efficiency benefits flowing from the refusal to deal.

A legal standard can harmonize these issues with a desire to maintain appropriate longer run innovation incentives.[3]

II. Basic Legal Framework

8. Antitrust law can choose among a variety of standards for enforcing the law against anticompetitive refusals to deal, including the basic rule of reason or a number of "short-cut" rules. These include the following standards:

    a. *Per se illegality:* This rule would entail an unconditional duty to deal, presumably at the marginal cost of the integrated firm.

    b. *Per se legality:* This rule would permit a vertically integrated firm unfettered discretion to choose with whom it deals, irrespective of any purpose or effect to achieve or maintain monopoly power in any market.

    c. *Consumer welfare effect standard:* This rule of reason-type standard would hold the defendant liable only if the refusal to deal is proven to have the effect of permitting the integrated firm to raise or maintain prices and reduce output in a relevant market, relative to an appropriate non-exclusion benchmark. (The definition and role of this benchmark is discussed in more detail below.)

    d. *Profit-sacrifice standard:* Under this standard, the integrated firm would be liable if and only if the refusal to deal reduces its profits. This is a "short-cut" rule because showing an actual anticompetitive impact of the refusal to deal on output prices is neither necessary nor sufficient for a finding of liability, and may not even be deemed relevant. Profit-sacrifice is in effect used as a surrogate for anticompetitive effects.

    e. *No economic sense ("NES") standard:* This variant of the profit-sacrifice standard would hold the integrated firm liable if the refusal to deal would not be as profitable as dealing at the non-exclusionary benchmark price, absent any tendency to lessen competition caused by the conduct. This also is a "short-cut" rule because showing an actual anticompetitive impact of the refusal to deal on output prices is neither necessary nor sufficient for a finding of liability.

    f. *Equally-efficient entrant standard:* This standard would permit refusals to deal if the entrant is less efficient than the integrated firm. Even if this standard is not adopted formally, the spirit of the standard might be utilized in formulating bright-line rules.

9. Except for per se illegality, none of these standards create a "duty to deal." Instead, they define situations in which a refusal to deal would be anticompetitive. No recent courts or commentators have proposed per se illegality as an antitrust rule, though some economic regulatory agencies mandate a duty to deal. The SMP theory might suggest the relevance of a rule of per se legality. However, the non-robustness of the

[3] A discussion of the extent to which patent law trumps antitrust law with respect to refusals to deal is beyond the scope of my statement.

SMP theory suggests that such a safe harbor rule would not constitute sensible antitrust policy. In *Aspen, Kodak* and *Trinko*, the Court rejected both per se standards. The Court placed the burden of justifying a termination of a previous course of dealing on the defendant, and it rejected certain types of justifications as a matter of law, as discussed in more detail below. My article examines the use of the consumer welfare effect and profit-sacrifice standards in the case law, but I will not review that discussion here.

10. This statement will not focus on the equally-efficient entrant standard. First, that standard was developed in the context of homogeneous product markets. The concept of an equally-efficient entrant is not well-defined when products are differentiated rather than homogeneous. Even if an entrant has higher costs, its differentiated product would benefit many consumers who prefer it. Second, the standard conflicts with the basic goal of antitrust to increase competition and consumer welfare. Entry by higher cost (even clearly less efficient) competitors can provide competition to a monopolist and cause prices to fall and output to rise, which increases consumer welfare and allocative efficiency. The entrant's higher costs may cause a reduction in production efficiency, but if the exclusionary conduct raises the entrant's costs while leaving the entrant viable, those cost increases reduce production efficiency, so a negative effect of the conduct on production efficiency is not obvious, and any negative effect is less likely to offset the increase in allocative efficiency. At the same time, consumer welfare surely increases.

11. I next will summarize my analysis of the consumer welfare effect standard. I then will summarize my analysis of the profit-sacrifice and no economic sense standards as they would apply to unilateral refusals to deal. I will focus on the impact of refusals to deal on price and quantity. However, this focus is not intended to rule out other harms, which may occur with respect to quality or innovation. I will discuss the impact of the standards on innovative incentives.

III. The Consumer Welfare Effect Standard

12. Under this rule of reason standard, the court would require evidence showing that the effect of the refusal to deal is to raise or maintain supra-competitive prices, either in the output market, the input market or a related output market. The court also might evaluate evidence regarding the presence or absence of the structural conditions associated with anticompetitive effects versus the structural conditions of the SMP theory. As part of this analysis, the court would determine an appropriate non-exclusion "benchmark." As part of this analysis, the court also would evaluate evidence of any pro-competitive efficiency benefits of the refusal to deal. Finally, the court might find it useful to evaluate evidence of the profitability of the refusal to deal as potentially probative of anticompetitive intent, but a finding of profit-sacrifice (or NES) would not be necessary or sufficient for antitrust liability.

13. There are significant benefits to this rule of reason standard. The consumer welfare effect standard is accurate when properly applied. The consumer welfare effect standard is focused on evaluating the competitive effect of the refusal to deal. The profit-sacrifice and NES standards do not focus on the direct competitive effect of the

conduct on prices and output. Thus, the consumer welfare effect standard overall leads to fewer direct errors, both false positives and false negatives, relative to the profit-sacrifice and NES standards.

14. Contrary to the concerns of some commentators, the consumer welfare effect standard might well set a higher bar for plaintiffs than the profit-sacrifice or NES standard, at least in some cases. The consumer welfare effect standard is not more complicated to implement than the profit-sacrifice or NES standards. Nor would the consumer welfare effect standard compromise innovation incentives.

15. Use of the consumer welfare effect standard also would help to unify antitrust into a coherent whole. As discussed in my article, this standard can be used in enforcement for all types of unilateral exclusionary conduct, as well collusive and exclusionary agreements subject to Section 1 and mergers subject to Section 7. It also would eliminate attempts by litigants to gerrymander the formulation of antitrust allegations in order to gain more favorable antitrust treatment. One good example of what should be avoided is illustrated by *Jefferson Parish*, where the litigants argued over whether the conduct was "really" tying versus exclusive dealing or partial vertical integration by contract. The stakes were high because tying is per se illegal and exclusive dealing and vertical integration are analyzed under a more permissive rule of reason. Instead of this argument, it would have been far more productive for the litigants to spend their time and money evaluating whether the conduct increased or decreased price and quantity.

16. I now turn to a more detailed analysis of this rule of reason standard.

17. One might think that a standard focused solely on price and quantity necessarily would be violated by any refusals to deal. Short-run consumer welfare would increase if the unintegrated firm is able to enter the market, and it might be assumed that the lower the input price the better the outcome. However, as discussed below, the consumer welfare standard does not go this far.

18. Defendants sometimes make efficiency claims for refusals to deal. Evaluating these efficiency benefits would be an integral part of the analysis under the consumer welfare effect standard. As in every antitrust case, the court must evaluate whether these claims are valid or whether they are pretextual, implausible or not cognizable under the antitrust laws.

    a. The defendant might claim that selling the input to outsiders would be infeasible. The integrated firm may have binding capacity limitations. Similarly, it might be too costly for the integrated firm to adjust the design or production of the input so that it fits the needs of the unintegrated competitor. Alternatively, a sales agreement might raise significant transactions costs that would make agreement infeasible. For example, it might be difficult to reach a practical agreement if an independent auto producer wanted to use a partially vacant GM assembly plant to assemble its cars.

    b. The defendant might claim that refusal to deal was intended to avoid free riding by the competitor on the reputation or technology of the integrated firm. These benefits can be legitimate. For example, suppose that the unintegrated competitor advertises that it is being supplied by the integrated firm to disguise the fact that its product is low quality, a fact that seriously harms the reputation of the product sold by the integrated firm. However, the Supreme Court has made it clear that free riding defenses would be narrowly drawn and the defendant would bear a heavy burden. For example, in *Kodak*, the defendant argued that the plaintiffs were free riding on its investments in the output market by competing as unintegrated firms. The Court summarily rejected this justification on the grounds that this meaning of free riding on investments had no support in the case law. The *Kodak* Court also rejected as pretextual a justification based on a claim that the plaintiffs' products were inferior and would harm Kodak's reputation. In *Aspen*, the Court also rejected a defense based on a desire to dissociate itself from plaintiff's inferior offerings.

19. A different type of justification involves a claim that the defendant is not interested in dealing with the unintegrated competitor at the input price desired by the competitor and has no "duty to deal" with competitors. Unless a rule of per se legality is adopted, this justification would be limited by a finding that the refusal to deal is anticompetitive.

20. However, in order to avoid concluding that all refusals to deal are anticompetitive (per se), the court must determine an input price benchmark that would be viewed as non-exclusionary if the integrated firm sold at or below that price. Such a "non-exclusion" benchmark also is useful for distinguishing anticompetitive refusals to deal from mere bargaining failure in the negotiation between the integrated firm and the unintegrated competitor. (Importantly, as discussed below, a non-exclusion benchmark also is needed for the profit-sacrifice and NES standards, as discussed below; this means that these standards are more similar in practice to the consumer welfare effects standard than might have been expected and are not simpler rules to implement.) Finally, the benchmark price can be useful in formulating an equitable remedy.

21. Setting the non-exclusion input price benchmark equal to the defendant's marginal cost of producing the input would not be appropriate except in very special circumstances. This is because the integrated firm generally should be entitled to earn a return on input sales consummate with whatever market power it has achieved legitimately. A return on this investment in the input technology also may be needed to maintain adequate investment incentives.

22. In cases in which the refusal to deal involves the termination of a previous course of dealing, that previous price is an obvious candidate for the non-exclusion benchmark. Similarly, if the defendant integrated firm supplies the input to firms other than the excluded competitor, that price is an obvious candidate for the benchmark. Of course, the appropriateness of these benchmarks may be questioned if market conditions have changed or if conditions differ across the markets. Cases in which the defendant has never supplied the input to anyone are the most difficult to analyze because the price benchmark must be estimated. A new benchmark also might be necessary if market conditions differ or have changed. As discussed later on, these considerations apply equally to the profit-sacrifice and NES standards as well.

23. This analysis also suggests an important distinction between *non-negotiable* refusals to deal and situations where the vertically integrated defendant has made a bona fide offer to supply the input at some price but the unintegrated firm has rejected its offer.[4] Bargaining failure is a more likely cause if the parties each have made legitimate price offers that the other has not accepted than if the refusal to deal is non-negotiable. *Kodak* involved a non-negotiable refusal to deal. *Aspen* did too with respect to the daily lift tickets. Non-negotiable refusals to deal also would seem to raise greater suspicions that the primary motivation for the refusal to deal is anticompetitive.

24. Before discussing the determination of the non-exclusion benchmark in cases in which the integrated firm has not recently sold the input, or where the other price benchmarks have lost their relevance, I want to discuss the other parts of the analysis. (This is because the discussion of the benchmark is more technical.) To simplify this analysis, assume also that the defendant's proffered efficiency benefits based on infeasibility or free riding have been rejected by court so that those issues can be put to the side for the moment. On these facts, some commentators might suggest that the court should adopt a *short-cut rule* that condemns the conduct, even absent a showing of likely anticompetitive effect. For example, this type of condemnation would arise for the profit-sacrifice and NES standards.

25. However, such summary condemnation would not be made under the consumer welfare effect standard.

    a. First, proving an actual or probable anticompetitive effect on price and output is necessary for a finding of liability. This requirement is particularly important when the integrated firm has market power in the input market but lacks market power in the output market. For example, suppose that the only fertilizer dealer in an isolated farming area is also a farmer and refuses to sell fertilizer to the competing farmers in the area. Suppose that the cost to these competing farmers of shipping in fertilizer from elsewhere is significantly more expensive and would lead these competitors to exit. That refusal to deal may involve a sacrifice of profits by the integrated farmer and the conduct might not make "economic sense" in the way that the term is used in the NES standard. But, if the relevant output market is national, then this refusal to deal likely would not have any discernable impact on prices or anticompetitive effect on consumers. As a result of this lack of market power in the output market, a court would not find the defendant liable in this case under the consumer welfare effect standard. (In contrast, an inference of consumer harm might make more sense if the integrated firm has monopoly power in both markets.)

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[4] The term *non-negotiable* refers to refusal to deal regardless of the price offered by the competitor. If the defendant purposefully makes an offer that the competitor surely will reject, that conduct could be interpreted as a non-negotiable refusal to deal. This appears to have been the case in *Aspen* with respect to its offer to divide up the revenues from the joint weekly lift tickets.

b. Second, the consumer welfare effect standard would condemn the conduct only if the anticompetitive effects of the refusal to deal were reasonably foreseeable by the defendant. For example, suppose that the defendant most likely lacks the ability to deter entry because the entrant likely could backward integrate and produce the input itself. But, suppose that the backward integration fails for reasons that could not have been anticipated by the integrated firm. No liability would attach to such refusals to deal. The competitive evaluation must be based on information reasonably available to the defendant at the time of the exclusion. (For the same reason, refusals to deal that were reasonably expected to reduce consumer welfare but fail to do so for unanticipated reasons would violate the standard. Biased outcomes are avoided by treating imperfect information symmetrically.)

26. I now turn to the determination of the non-exclusion input benchmark for cases in which there was no prior course of dealing between the integrated firm and any other firms (i.e., neither competitors nor non-competitors), or where the prior course of dealing does not provide an adequate benchmark.

a. One conservative candidate for the non-exclusion benchmark that permits the exercise of legitimately obtained input market power and maintains investment incentives would be the input price that would be charged by a hypothetical standalone (i.e., unintegrated) supplier with the same degree of legitimate market power in the input market as the integrated firm. To operationalize this benchmark, suppose hypothetically that the integrated firm is assumed to be divided up into two independent, unintegrated firms – a standalone input supplier and a standalone output producer. (For example, this would be the type of structure following a hypothetical "vertical divestiture" of the sort actually implemented against AT&T in the 1980s by the DOJ under AAG William Baxter and proposed for Microsoft by the DOJ prior to the 2001 settlement.) This "standalone" input price benchmark would be the profit-maximizing price that the standalone input supplier would charge the entrant.

b. Another conservative benchmark is the input price that maintains the profits of the integrated firm. This benchmark is the input price that generates the same combined profit level for the integrated firm from the input and output markets as would be achieved by refusing to deal.[5] This "protected-profits" input price benchmark or one of its variants could be applied to the profit-

[5] This protected-profits benchmark was initially derived by Ordover and Willig in the context of their analysis of a profit-sacrifice test for refusals to deal and duties to deal in regulated markets, and in that context the benchmark was named the "efficient components pricing rule" ("ECPR"). See Janusz A. Ordover and Robert D. Willig, *Access and Bundling in High-Tech Markets*, in Jeffrey A. Eisenach and Thomas M. Lenard, eds., COMPETITION, INNOVATION AND THE MICROSOFT MONOPOLY: ANTITRUST IN THE DIGITAL MARKETPLACE 103 (1999). As discussed below, a variant of this rule that does not protect certain categories of pre-entry profits also may be relevant.

sacrifice and NES standards as well. Except for markets satisfying the special SMP theory assumptions, this protected-profits benchmark would differ from the standalone input monopolist benchmark.

c. The choice of benchmark applies to all three of these standards. The AMC could make an important contribution to the analysis of refusals to deal by holding follow-up hearings to evaluate these alternative benchmarks. At the end of this statement, I discuss a possible simple approximation to one version of the benchmark.

27. Both these benchmarks are conservative in that they respect the integrated firm's existing market power in the input market, even if the firm is an input monopolist and even if that market power was not achieved through innovation. A court may want to adjust these benchmarks in order to avoid problems similar to those identified with the *Cellophane* fallacy.

28. If the benchmark price could be estimated without error, then price offers by the integrated firm at or below the benchmark could be treated as a "safe harbor." That is, a showing that the integrated firm had a non-negotiable refusal to deal policy or refused bona fide input price offers at or above this benchmark price level would be necessary for finding liability. Moreover, under the consumer welfare effect standard, that showing would not be sufficient by itself for finding antitrust liability. The plaintiff also would be required to show anticompetitive effect of the refusal to deal in one of the relevant markets.

29. Because the estimation of this benchmark price is subject to error, an "efficient" legal rule would place somewhat less weight on this type of evidence, relative to other more accurate relevant evidence. This methodology of weighting evidence is consistent with standard decision theory considerations.[6] Other relevant evidence would include evidence evaluating the impact of the refusal to deal on prices in the relevant markets. This would include analysis of the market conditions to see whether they are consistent with the various anticompetitive theories listed above, as opposed to the conditions supporting the SMP result. It also would include evidence of whether or not the integrated firm has and could achieve or maintain market power in the relevant markets. The evidence also would include analysis of any efficiency benefits flowing from the refusal. Finally, evidence relating to profit-sacrifice (or NES) also would be relevant for evaluating anticompetitive purpose and intent.[7] (It also would be weighted according to its likely accuracy.)

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[6] As a general matter, suppose that there are two types of evidence that are relevant to a factual finding. Suppose that both types of evidence are unbiased but one is more accurate in the sense that it has a lower variance (i.e., errs less often). Both types of evidence would be used by the fact finder, but more weight would be placed on the more accurate class of evidence.

[7] This suggests that an advantage of using the protected-profits benchmark is that it would permit a common methodology.

30. Because the consumer welfare effect standard is focused on the impact of the conduct on prices and output, because the burden of persuasion is placed on the plaintiff, and because only reasonably foreseeable harm is cognizable, the consumer welfare effect standard is unlikely to be biased towards false positives, relative to the profit-sacrifice or NES standards.

31. Nor would innovation incentives be compromised by adoption of the consumer welfare effect standard. This is a conservative approach. This approach would not require the defendant to supply the input at cost. When the consumer welfare effect standard uses the standalone or the protected-profits input price as a benchmark, the defendant has the ability to charge a supra-competitive input price. Thus, these standards permit the integrated firm to earn a return on its market power in the input market, even if that market power was not achieved through innovation. Permitting this return also incentivizes future innovation by the integrated firm. A more permissive legal rule would not be necessary to maintain innovation incentives. The consumer welfare effect standard also would ensure that unintegrated competitors maintain their own ability and incentives to innovate, without the additional constraint of having to enter the input and output markets simultaneously. In addition, there is no credible empirical evidence suggesting that antitrust standards or enforcement deters innovation.

32. It is also noteworthy that using a more permissive rule such as per se legality or the profit-sacrifice standard to generate greater innovation incentives is not supported by the case law or basic antitrust principles. For example, the *Kodak* Court rejected the defendant's justification that the plaintiffs were free riding on its investments in the output market by competing as unintegrated firms. Such a justification generally also would be rejected on the basis of general antitrust principles. If enhancing innovation incentives were treated as a trump card, it also would justify vertical agreements with multiple independent input suppliers to deny critical inputs to competitors solely on the grounds that entry would lead to lower output prices and profits and, therefore, reduced incentives to innovate. That same broad view of innovation incentives also might be used to justify price fixing by competitors in innovative markets. This approach would overlook the positive effects of dealing on entrants' innovation incentives. Moreover, this approach runs counter to the basic premise of the Sherman Act – that consumer welfare is served by competitive markets, not by awarding legal monopolies to firms that fail to obtain the legal protection of patents or copyrights.

33. Finally, in rare cases, it might be appropriate for the law to create exceptions to the use of the standalone or protected-profits input price as the non-exclusion benchmark. One possible exception would be the situation where the integrated firm's monopoly power in the input market was not acquired legitimately but rather involved previous anticompetitive conduct. Another possible exception would be the situation where the integrated firm acquired monopoly power in the input market from a regulatory grant, but the firm is no longer regulated. In both these situations, it may not be in the interest of consumers for the firm to earn a return on this monopoly power or have the incentive to maintain that monopoly with refusals to deal. In such cases, it might be appropriate for the court to utilize a lower non-exclusion benchmark closer to the firm's marginal costs of producing the input (including a competitive return). This

approach is similar in some ways essential facilities doctrine, but it is structured here in a way that is integrated into the analysis of anticompetitive refusals to deal.

IV. The Profit-Sacrifice and No Economic Sense ("NES") Standards

34. Under these standards, the court would focus on the profitability of the refusal to deal, relative to some type of non-exclusion benchmark. Proper implementation of the profit-sacrifice or NES standard is not simple because of several complex issues revolving around the determination of the proper non-exclusion benchmark.

35. The profit-sacrifice and NES standards are advertised as superior to the consumer welfare effect standard because they are said to be straightforward to implement with easily accessible information, and essential to preventing false positives and maintaining appropriate innovation incentives. In fact, they fail on all of these dimensions and, thus, would seriously degrade the quality of antitrust analysis in a wide array of cases. This is because the standards are short-cut standards that are not tied directly to the anticompetitive effects of the conduct. Their tests also are not so simple to measure in practice. This section of my statement explains why.

36. The profit-sacrifice and NES standards would lead to lead to errors because these standards are short-cuts and are not tied directly to the anticompetitive effects of the conduct. On the one hand, absent a showing of profit-sacrifice or NES, an integrated firm would not be liable for a refusal to deal with a proven anticompetitive effect, an outcome that would be a false negative. On the other hand, a refusal to deal that involves profit-sacrifice could violate the antitrust laws even if it failed to cause an anticompetitive effect, an outcome that is a false positive. For example, this would be the case in the hypothetical of the small farmer vertically integrated into a fertilizer monopoly in a local area. This would be a false positive.[8]

37. These false negatives might be surprising because a first impression might suggest that these standards could entail a very interventionist approach. For example, assuming that supplying the input is feasible, transactions costs are modest and there are no free rider issues, the simplest analysis might appear always to find input market profit-sacrifice for all *non-negotiable* refusals to deal. It would be natural to presume that there is some input price that would increase the defendant's input market profits. If the defendant does not sell at that input price, then it is sacrificing input profits (and its conduct would not make economic sense) absent anticompetitive tendencies.

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[8] There may be some disagreement over whether these standards also would require the plaintiff to prove anticompetitive effect. Based on my own reading of the articles supporting the profit-sacrifice and NES standards, it does not appear that the integrated firm could defend its conduct by arguing that there is no actual anticompetitive effect, if there were a "tendency" for such an effect. Moreover, if it were assumed that it was practical to accurately evaluate the actual competitive effect of the conduct, then this showing ought to eliminate the need for the "proxy" showing profit-sacrifice or NES.

38. This logic immediately raises the question of whether the proper analysis would consider just input market profits or whether it should include output market profits as well.[9] For example, even if input profits are sacrificed, the defendant might make higher total profits by selling the output itself rather than by selling just the input to a competitor. This argument was made by Verizon in *Trinko*, though it was not mentioned in the Supreme Court's opinion. In this regard, *Aspen* focused solely on input market profits. If the defendant Ski Co. refused to sell daily tickets to its competitor Highlands at the standard price, Ski Co. likely would sell more weekly tickets itself (and hence would immediately recoup any lost profits). But, the Court did not balance these profit gains on weekly tickets against profits sacrificed on daily tickets. The Court did not explain itself. Perhaps the Court viewed those additional weekly ticket sales as anticompetitive because Ski Co. was willing to sell the tickets to others.[10]

39. My analysis suggests that it is reasonable for courts to balance the profits in the input and output markets, at least if the market power in the input market were obtained by superior skill, foresight and industry, as opposed to anticompetitive conduct or regulation. However, this balancing is not so simple for most real world cases. It is considerably more complicated than Verizon suggested.

40. Balancing input and output profits is straightforward when the products sold by the integrated firm and its unintegrated competitor are identical and consumer demand is not price sensitive. In this case, if the integrated firm refuses to provide X-units of the input to its competitor, then it will be able to sell an additional X-units of its own product to consumers. But, the analysis is more complicated when the products are differentiated and consumer demand is sensitive to prices. In that case, there is no one-to-one substitution. For example, if Verizon fails to provide inputs for DSL to AT&T, it is true that some customers will buy retail broadband service from Verizon. But some others will choose to obtain cable or wireless broadband modems from other providers. Still others will stay with their dial-up service. In order to implement the profit-sacrifice test, this substitution must be estimated, which is not an easy task. It is even harder if Verizon's retail broadband initially is more expensive than AT&T's and Verizon's service would be priced if entry were to occur, or if the carriers' service qualities differ.

41. In addition, if such balancing of profits is permitted, the court must determine the non-exclusion benchmarks for the input and output prices. This raises another critical question: should the output price used in the profit balancing be the price that

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[9] In the case where an unintegrated firm induces independent input suppliers to refuse to sell to its competitors, payments or other consideration paid by the firm to the suppliers also would be reckoned into the analysis as a cost of the conduct.

[10] Or, perhaps Court viewed significant incremental weekly ticket sales as unlikely because the next-best substitute for consumers would have been to buy a package from a tour operator that included Ski Co. tickets sold at an even lower price. Or, perhaps the defendant simply failed to see the relevance of this issue and did not raise it, or perhaps the defendant dropped the issue below.

would prevail in the *presence* or *absence* of the refusal to deal? Similarly, what input price benchmark should be used?

42. If there has been a previous course of dealing, then the pre-exclusion input and output prices in the market would be the natural benchmarks. If there have been no input sales to the unintegrated competitor, but the defendant has supplied the input to other firms, then an alternative benchmark for the input price might be the price that the defendant charges other customers. If this benchmark would make sense in the case, the output market price benchmark then could be set at the market price that would be predicted if the unintegrated competitor were able to purchase the input at the benchmark input price. This output price benchmark– and the corresponding sales of the firms – would have to be estimated by the economic experts. This evaluation would not be a trivial task in a typical oligopoly market with differentiated products and would engender controversy.

43. In the absence of previous dealing, a court might be inclined to utilize the initial monopoly price of output that existed before the entrant came on the scene. But, this output price would be maintained only in the presence of a continued refusal to deal. As a result, this procedure ignores the beneficial impact of supplying the input to the unintegrated competitor at the benchmark input price (i.e., the price at which the input is sold to others) on creating competition in the output market, which in turn would cause the integrated firm's output market price to fall to a lower level.

44. Where the integrated firm has no prior course of dealing with any firms, the court would need an alternative input price benchmark. This is another way in which these standards become complex. One conservative non-exclusion input price benchmark for the profit-sacrifice (or NES) standard is the protected-profits benchmark discussed earlier. The protected-profits benchmark input price is the price that generates the same profits for the incumbent as it would earn in the input and output markets from a refusal to deal, ignoring any impact of entry in its degree of market power in the input market or other related product markets. Thus, this benchmark "grandfathers" the profits earned by the integrated firm in the input and output markets before the entry of the unintegrated competitor. This benchmark would indicate profit-sacrifice if the defendant refused to sell to unintegrated competitors at an input price at or above the benchmark input price. (As discussed earlier, this protected-profits benchmark also could be used for the consumer welfare effects standard. Evidence of profit-sacrifice remains relevant under the consumer welfare effects standard and use of a common methodology would clarify the economic analysis for the court.)

45. Under the very limited theoretical conditions under which the SMP theory holds, the protected-profits input price benchmark would be equal to the output price less the integrated firm's marginal costs of downstream production. However, for more realistic market conditions of differentiated products and price sensitive consumers, the benchmark input price under the protected-profits benchmark would be lower. In fact, for reasonable market structures, the protected-profits benchmark price is substantially lower than the input price that is generated from the theoretical SMP assumptions. The price difference is larger for situations where only a fraction of the units of the input sold to the entrant translate into units of lost output sales for the integrated firm. Thus, the theoretical SMP input price is a poor proxy measure for the

actual input price benchmark that measures the true profit-sacrifice suffered by the integrated firm. (In fact, the SMP price proxy permits the integrated firm's profits to *rise*.) Nor would this SMP proxy measure be objective in any way, in that it is based on unrealistic theoretical assumptions.

46. The protected-profits benchmark allows the defendant to make itself whole even if it supplies the input. The benchmark fully compensates the firm with respect to the sales it loses. It also immunizes its profits from the inevitable and beneficial price competition created by the new entry on the profits of its continued sales. This latter protection means that a rule based on this benchmark is a poorer proxy for the impact of the refusal to deal on consumer welfare and so represents a somewhat less defensible antitrust policy. It is one thing to say that the defendant should be allowed to balance additional profits earned on input sales against profits lost in the output market on sales lost to the entrant. It is quite another thing to conclude that the integrated firm is entitled to protect ongoing monopoly profits after competition drives down the output market price. After all, competition is a natural and desirable phenomenon and antitrust does not typically protect such profits. Accordingly, it might be reasonable for the court to use a variant of the protected-profits benchmark that does not protect the defendant's post-entry output sales from the profit reduction caused by competition. The application of this variant would reduce the protected-profits benchmark input price still further below the theoretical SMP price. (This variant also could be used for the consumer welfare effects standard.)

47. Determination of these price benchmarks would be sensitive to the technological and market structure assumptions made by the experts. These estimation complexities suggest that this evidence will be subject to controversy. However, this analysis is necessary to avoid much greater errors caused by using a knowingly biased proxy benchmark like the theoretical SMP price.

48. This analysis also demonstrates why the use of the profit-sacrifice or NES standard would not ease the informational burden on the defendant, but could significantly raise the burden of production for plaintiffs in problematic ways.[11] Both types of analysis involve the need to estimate the non-exclusion benchmark prices when there is no prior course of dealing to use as a benchmark. Even in situations where the price charged to others can be used as a benchmark, the profit-sacrifice standard requires the defendant firm to estimate the output price that would result from input sales at that price, in order to avoid the sort of problems identified with the *Cellophane fallacy*. Thus, the consumer welfare effect standard does not require additional analysis.

49. However, this analysis of the benchmark raises another key question: is this input price benchmark too difficult to for firms or courts to calculate? Calculation of the benchmark prices would be difficult to for the managers of firms to quickly estimate

[11] Requiring plaintiffs to allege and prove profit-sacrifice in order to state a claim ignores anticompetitive effects and also requires plaintiffs to make allegations that rely on knowledge of the defendant's internal costs. Prior to discovery, plaintiffs are far more likely to have ready access to evidence of the former than the latter.

without the assistance of economic consultants. However, there is a ready approximation that could be used for the benchmark defined in ¶46. This approximate benchmark input price can be calculated by a simple formula that relies only the information about the integrated firm's initial output price, its incremental costs of production of the input, its incremental costs of producing the output other than the cost of the input, and the degree of substitution (i.e., a diversion ratio) between the unintegrated competitor that wishes to purchase the product and the integrated firm. The formula is the following:

Benchmark Input Price = Input Cost + Div. Ratio x (Price – Input Cost – Output Cost)

This formula would not be difficult to calculate. If the diversion ratio ("Div. Ratio") were assumed to be unity instead of its actual value, then this formula generates the SMP price. However as discussed earlier, the SMP price is biased upward in the usual case where the products are differentiated. This approximation is conservative because the diversion ratio typically overestimates the fraction of the entrant's sales taken from the integrated firm.

V. Conclusions

50. In conclusion, my analysis suggests that the profit-sacrifice (and NES) standards have much in common with the consumer welfare standard. However, my analysis also suggests the superiority of the consumer welfare effect standard.

    a. As a matter of substance, the consumer welfare effect standard would minimize direct errors, both false positives and false negatives, relative to the profit-sacrifice and NES standards. The consumer welfare effect standard is focused on evaluating the competitive effect of the refusal to deal. In contrast, the profit-sacrifice and NES standards are short-cut standards that are not tied directly to the anticompetitive effects of the conduct on prices and output.

    b. Evidence relevant to the consumer welfare effect standard would include evidence of profit-sacrifice (like the other standards), but a showing of profit-sacrifice (or no economic sense) would be neither necessary nor sufficient for a finding of antitrust liability. Instead, that evidence would be combined with other relevant evidence to determine the likely impact of the refusal to deal on prices and output in the relevant markets. The weight placed on each type of evidence would depend on the likely accuracy of the evidence.

    c. Opting for the profit-sacrifice and NES standards instead of the consumer welfare effects standard would not ease the antitrust planning burden on firms or the implementation burden on courts. For one thing, the consumer welfare effect standard is easier to implement in cases in which the integrated firm lacks market power in the downstream output market or any ability to achieve it. In addition, the profit-sacrifice and NES tests require information on the substitution between the integrated firm and its unintegrated competitors, even where there has been a prior course of dealing. Where there is no prior course of dealing by the integrated firm, they require the same type of determination of non-exclusion price benchmarks as the consumer welfare effect standard.

d. Innovation incentives would not be compromised by the consumer welfare effect standard. The consumer welfare effect standard does not mandate the defendant to supply the input at cost. The defendant could earn supra-competitive profits on the input. The consumer welfare effect standard also would ensure that unintegrated competitors also have the ability to innovate, without the additional constraint of having to enter the input and output markets simultaneously.

e. In addition, the proper weight placed on innovation incentives necessarily is limited by basic antitrust principles. For example, the defendant in *Kodak* argued that the plaintiffs were free riding on its investments in the output market by competing as unintegrated firms. The Court rejected this justification. Such a justification generally would be rejected because it would run directly counter to the basic premise of the Sherman Act – that consumer welfare is served by competitive markets, not by awarding legal monopolies beyond the legal protection granted in patents and copyrights.

f. Finally, the use of the consumer welfare effect standard would help to unify antitrust into a coherent whole, focused on anticompetitive effect. It would help to eliminate the loose economic reasoning that characterized the utilization of per se rules in an earlier period of antitrust jurisprudence. It also would eliminate the attempts by litigants to gerrymander the formulation of antitrust allegations in order to gain more favorable antitrust treatment, owing to standards that vary by category of conduct. Courts should focus on evaluating the likely competitive effects of conduct, not characterization by analogy, ideology or unsupported assertion. In that way, antitrust will truly continue to modernize.

51. For these reasons, I hope that the Commission will endorse the use of the consumer welfare effect standard by courts for evaluating refusals to deal and other unilateral exclusionary conduct. I hope that the Commission will endorse the use of the profit-sacrifice and NES tests as a component of the rule of reason analysis under the consumer welfare standard, but will not suggest that these short-cut tests be used as either necessary or sufficient showings for antitrust liability.[12] I also hope that the Commission will hold further hearings to investigate the relative merits of alternative non-exclusion price benchmarks, including approximations. However, I hope that the

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12 This statement has not discussed conditional or bundled rebates. However, the discussion here about the importance of focusing on effects also applies to the controversy over the proper standard to govern rebates. Antitrust law should strive to focus on the evaluation of the economic effects of rebates rather than engaging in a metaphysical debate over whether rebates "really" are (i) price discounts, subject to legal standards for predatory pricing; (ii) de facto tying, subject to legal standards for tying; or (iii) exclusive or near-exclusive dealing, subject to legal standards for exclusive dealing.

Commission does not recommend legislation to mandate any particular standard or test. Development of antitrust doctrine through the evolution of the case law is a slower but less error-prone path to modernization.