COMMENTS TO THE FEDERAL TRADE COMMISSION AND DEPARTMENT OF JUSTICE ANTITRUST DIVISION

HMG REVIEW PROJECT – COMMENT, PROJECT NO. P092900

MARGINS IN MERGER ANALYSIS

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These comments are submitted in response to the Federal Trade Commission and Antitrust Division's request for comments on the proposed revisions to the Horizontal Merger Guidelines ("Guidelines") issued on April 20, 2010. The proposed revisions on balance represent an improvement over the current Guidelines and are more transparent in certain respects in terms of the types of evidence upon which the agencies rely most. The agencies should be commended for their efforts.

The proposed revisions, however, also seem to suggest that the agencies will use the existence of high margins to create a presumption of lack of demand responsiveness, narrow markets, and/or market power. Section 2.2.1 states "if a firm sets price well above marginal cost, that normally indicates either that the firm is coordinating with its rivals or that the firm believes its customers are not highly sensitive to price." Section 4.1.3 states "high pre-merger margins normally indicate that each firm's product individually faces demand that is not highly sensitive to price. Higher pre-merger margins thus indicate a smaller predicted loss…" The language cited above could easily be interpreted to create presumptions of lack of demand responsiveness in a way that could result in the definition of extremely narrow markets or presumed price effects via Upward Pricing Pressure ("UPP") for a very large universe of mergers.

There is a very substantial controversy over whether the use of margins to create a presumption in this way is justified. Although the proposed revisions do not specify the basis for such an approach, it appears to assume general applicability of: (1) the Lerner Condition and (2) and certain assumptions regarding demand.[2] This set of assumptions is problematic.

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[2] S*ee* Daniel O'Brien & Abraham Wickelgren, *A Critical Analysis of Critical Loss Analysis*, 71 ANTITRUST L. J. 161 (2003); Joseph Farrell & Carl Shapiro, *Improving Critical Loss,* ANTITRUST SOURCE, Feb. 2008 at A1, available at http://www.abanet.org/antitrust/at-source/08/02/Feb08-Farrell-Shapiro.pdf.

The Lerner Condition is a formula appearing in standard undergraduate economics textbooks that posits a theoretical relationship between a product's margin and its demand elasticity, specifically that the inverse of the product's (negative) demand elasticity is equal to the product's margin. Hence, it is also sometimes referred to as the inverse elasticity rule. That relationship between the margin and demand responsiveness, however, is a theoretical one. It has not been demonstrated to reliably predict demand elasticities.[3] Even if the Lerner Condition is satisfied, the use of margins in the way suggested by the proposed revisions requires further assumptions relating to demand (the "demand assumptions").[4] The author is aware of no reason to think that these assumptions apply as a general rule.

An attempt to apply the Lerner Condition and/or the demand assumptions in market definition or to estimate UPP for mergers would have very significant consequences. In models where the Lerner Condition is satisfied virtually every horizontal merger is predicted to increase price, absent offsetting efficiencies, repositioning or entry. Because there is no price increase tolerance under Section 7 of the Clayton Act, application of such models becomes a very serious issue if we really believe the results they produce. There is no inherent limiting principle to the Lerner Condition and no limiting principle suggested in the proposed revisions. Even with very large efficiency assumptions, use of the Lerner Condition results in predictions of price effects for a universe of mergers that would not have been challenged since the 1960s.

With respect to market definition, the assumed combination of the Lerner Condition and the demand assumptions produces very narrow markets. With margins of 30-40% and above, most markets that are reviewed in a meaningful way by the Agencies would be defined as merger to monopoly or near monopoly. Thus, the use of price/cost margins via this combination of assumptions to carry out the market definition exercise or to drive unilateral effects analysis could dramatically change the character of merger enforcement.

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[3] Malcolm B. Coate & Joseph J. Simons, *Critical Loss vs. Diversion Analysis: Clearing Up the Confusion,* CPI ANTITRUST CHRONICLE (December 2009), available at http://www.paulweiss.com/files/Publication/049a8b58-fcca-4451-8bd1-0e0d2f7937c2/Presentation/PublicationAttachment/0c400796-31c0-413d-90d3-0f0f57c0fd9c/Simons%20GCR%20Article.Dec%2009.pdf.

[4] In particular, the models in the literature upon which the proposed revisions appear to be based tend to assume linear demand, constant diversion ratios and/or that the single firm SSNIP diversion ratio equals the uniform SSNIP diversion ratio. *See*. Katz & Shapiro, *supra* note 2, O'Brien & Wickelgren, *supra* note 2. O'Brien and Wickelgren also deal with the case of constant elasticity, which produces even more extreme results.

Before adopting approaches that dramatically transform merger enforcement, we should be fairly confident in the validity of their results.[5] Clearly there is something amiss in relying on techniques that produce such concentrated markets and predict price increases to such an extent. It would seem that either other factors are offsetting the impact of the Lerner Condition (and the demand assumptions) in the real world, the assumptions underlying the Lerner Condition and the shape of demand do not apply generally, or some combination of both. If use of the Lerner Condition and the demand assumptions are generally appropriate for creating presumptions relating to market definition and to drive presumptions regarding unilateral effects analysis, then merger enforcement has been far too lenient for over 30 years. In that case, one might expect to see evidence of anticompetitive price effects from a very large number of consummated mergers.[6] Indeed, one could view the last 30 years as a natural experiment on the general applicability of the Lerner Condition and the demand assumptions to merger analysis.

If the Lerner Condition is generally applicable, the only factors that could prevent a horizontal merger from raising price are repositioning, entry, and efficiencies. Yet, these factors are notoriously difficult to prove to the satisfaction of the agencies and could not possibly save the large majority of mergers from attack under current practice. Moreover, because margin based market definition will result in very narrow markets, the language of the proposed revisions stating that efficiencies cannot save mergers to monopoly or near monopoly could effectively write the efficiencies defense out of the Guidelines.

Given the lack of evidence of price effects from the large number of consummated horizontal mergers over the last 30 years that would have been expected to produce price effects under UPP and similar margin based analyses, it would seem a reasonable conclusion that repositioning, entry, and efficiencies sufficient to restraint price (or the inapplicability of the Lerner Condition and/or the demand assumptions) are the rule rather than the exception. Accordingly, there is no reason to attach a presumption of anticompetitive effect to large numbers of mergers and to place the burden on the defendant to prove sufficient repositioning, entry, and/or efficiencies will occur with respect to such a universe of mergers or that the Lerner Condition and/or the demand assumptions are inapplicable.

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[5] The 1992 Guidelines used economic models of unilateral effects but it was understood that those models could only provide general guidance as to the appropriate analytic framework and factors to consider. Those models could not be applied directly because the results they produce are not generally credible. As a result, the 1992 Guidelines required for unilateral effects analysis of differentiated products that the merging parties have a combined share of 35% in the relevant market or be closest competitors. Under the proposed revisions, those requirements would be eliminated even though UPP and margin based market definition analysis have the same underpinnings and suffer from the same problems as the economic models relied upon by the 1992 Guidelines.

[6] Pointing to a few mergers here or there (or mergers at the margin of being challenged) that went unchallenged but produced price effects would not be nearly sufficient given the extent of the price effects predicted by these approaches based on the Lerner Condition and the demand assumptions.

Finally, reliance on the Lerner Condition in litigation would put the Government's cases in a dangerously fragile position. Perhaps the cross examination of the Government's expert economist would go something like this:

Q: Your analysis relies on the Lerner Condition, correct?

A: Yes

Q: If the Lerner Condition applies and we put to the side for a moment entry, repositioning and efficiencies, then every horizontal merger is predicted to increase price, correct?

A: Yes

Q: So every horizontal merger is then prima facie illegal under this analysis then. No further questions your honor.

The remainder of this comment is organized as follows. Section II describes the impact of using the unilateral effects approaches that rely on the Lerner Condition through simulations of the UPP model. These simulations show that even with the assumption of very large (i.e., perhaps unprecedented) efficiencies, the model produces anticompetitive price effects for 10 to 9 mergers involving firms with margins of 50% or greater, and for 6-5 mergers with relatively low margins of 30%.

Section III describes how use of the Lerner Condition and the demand assumptions would impact market definition. The various versions of the margins-based approaches to market definition that have been proposed in the literature produce very narrow markets even for industries with low margins. The proposed revisions to the Merger Guidelines appear to have adopted one or more of these approaches.

Section IV provides concluding remarks.

II. UPP AND ITS IMPLICATIONS[7]

UPP analysis focuses on the pressures for unilateral price effects while avoiding both the need for market definition and the much greater data requirements of traditional merger simulations. If the merging firms are symmetric (i.e. they are sufficiently similar for relevant purposes), UPP analysis can be undertaken with just evidence on diversion ratios, price-cost margins and an assumption on efficiencies. Assuming symmetric firms and assuming only one of the merger partners realizes efficiencies (i.e. ignoring efficiencies realized by the other merger partner), a merger is predicted to increase price if the %UPP is positive such that:

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[7] This discussion relies primarily on Simons & Coate, *Upward Pressure on Price Analysis: Issues and Implications*, March 1, 2010. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1558547#.

1) $\%UPP = D * M - E_1 * (1-M)$

where D equals the diversion ratio between the merging firms (i.e. the percentage of lost volume retained by one merger partner when the other raises price), M equals the margin (i.e. price minus marginal cost all divided by price), and E equals the efficiency measured as the percentage reduction in marginal cost.[8] Crediting efficiencies to both merging parties produces the following slightly more complex equation:

2) $\%UPP^* = D * M - E * (1-M) * (1-D)$

The UPP technique predicts that in the absence of merger-related efficiencies every horizontal merger in a differentiated product market exerts some upward pressure on price because the combined firm is able to recover the margin on sales gained by one of the merger partners when the other merger partner raises price. This result is easily confirmed by observing what happens to Equation 1 when efficiencies (E) are set to zero. As long as the firms have a positive margin, it is clear that the UPP percentage will be positive as long as the diversion (D) is positive.

Farrell and Shapiro propose an example setting a "standard efficiencies deduction" of 10 percent for marginal cost savings achieved by the merged firm. Whatever upward pressure that exists will be offset to some degree by any marginal cost reductions in the relevant market under investigation. The assumption of efficiencies avoids the result that every horizontal merger raises price. Marginal cost savings of 10% in the relevant market, however, would represent a level rarely if ever accepted by the agencies in practice. Even assuming such large efficiencies, the approach continues to predict price effects in a very large universe of mergers.

Tables 1-a and 1-b evaluate the UPP model defined by equation 2[9] for given values of the margin and diversion parameters, first when the efficiency index is set to 0 and then when it is set to 10 percent. Tables 1-a and 1-b are color coded in red and green to show the extent of predicted price effects (in red) and the absence of such effects (in green). Table 1-a shows all mergers in differentiated products result in a positive UPP, placing upward pressure on price. This confirms that the approach always predicts the merger will lead to higher prices in the absence of efficiencies. Given the symmetry assumption, the merger would generate the same upward price pressure for both merger partners.

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[8] Farrell & Shapiro (2010), *supra* note 2 at 10.

[9] Using equation 1 would not produce significantly different results. See Simons & Coate, *supra* note 6.

Table 1-a – UPP Model by Margin and Diversion, No Efficiencies

	Diversion						
Margin	0.10	0.15	0.20	0.25	0.30	0.35	0.40
0.90	0.0900	0.1350	0.1800	0.2250	0.2700	0.3150	0.3600
0.80	0.0800	0.1200	0.1600	0.2000	0.2400	0.2800	0.3200
0.70	0.0700	0.1050	0.1400	0.1750	0.2100	0.2450	0.2800
0.60	0.0600	0.0900	0.1200	0.1500	0.1800	0.2100	0.2400
0.50	0.0500	0.0750	0.1000	0.1250	0.1500	0.1750	0.2000
0.40	0.0400	0.0600	0.0800	0.1000	0.1200	0.1400	0.1600
0.30	0.0300	0.0450	0.0600	0.0750	0.0900	0.1050	0.1200
0.20	0.0200	0.0300	0.0400	0.0500	0.0600	0.0700	0.0800
0.10	0.0100	0.0150	0.0200	0.0250	0.0300	0.0350	0.0400

Table 1-b – UPP Model by Margin and Diversion, Ten Percent Efficiencies

	Diversion						
Margin	0.10	0.15	0.20	0.25	0.30	0.35	0.40
0.90	0.0810	0.1265	0.1720	0.2175	0.2630	0.3085	0.3540
0.80	0.0620	0.1030	0.1440	0.1850	0.2260	0.2670	0.3080
0.70	0.0430	0.0795	0.1160	0.1525	0.1890	0.2255	0.2620
0.60	0.0240	0.0560	0.0880	0.1200	0.1520	0.1840	0.2160
0.50	0.0050	0.0325	0.0600	0.0875	0.1150	0.1425	0.1700
0.40	-0.0140	0.0090	0.0320	0.0550	0.0780	0.1010	0.1240
0.30	-0.0330	-0.0145	0.0040	0.0225	0.0410	0.0595	0.0780
0.20	-0.0520	-0.0380	-0.0240	-0.0100	0.0040	0.0180	0.0320
0.10	-0.0710	-0.0615	-0.0520	-0.0425	-0.0330	-0.0235	-0.0140

Table 1-b adds a 10% standard deduction for efficiencies to the simulation. A quick review of the table shows that enforcers could be much more active than would be consistent with current agency practice. UPP would be positive for all mergers involving firms with 50% margins or higher (and diversion ratios of at least 10%) and for substantial numbers of mergers with margins in the 20% - 30% range as well.

Table 2 links the UPP results to market structure, again relying on equation 2, with the same color coding as the previous table. The analyses in Table 2 take the assumed diversion ratios and translates them into the number of competitors that would result assuming each competitor is equally situated (i.e., volume diverts equally to each other competitor assuming a price increase by one of the firms). For example, a 20% diversion ratio implies that there would be six equally situated premerger competitors (five firms receiving 20% of the diversion each for a total of 100%, plus the firm raising price). A merger would reduce the number of competitors to five. Table 2-a illustrates that (without efficiencies) all horizontal mergers are predicted to raise price under this approach, as the entire table is red. For example, there would be a positive UPP of 1.1 percent for situations involving a merger from ten to nine firms when the firms have margins of only 10%.[10]

Table 2-a - UPP Model by Margins and Rivals, No Efficiencies

				Rivals					
Margin	2	3	4	5	6	7	8	9	10
0.90	0.900	0.450	0.300	0.225	0.180	0.150	0.128	0.113	0.100
0.80	0.800	0.400	0.267	0.200	0.160	0.133	0.114	0.100	0.089
0.70	0.700	0.350	0.233	0.175	0.140	0.117	0.099	0.088	0.078
0.60	0.600	0.300	0.200	0.150	0.120	0.100	0.085	0.075	0.067
0.50	0.500	0.250	0.167	0.125	0.100	0.083	0.071	0.063	0.056
0.40	0.400	0.200	0.133	0.100	0.080	0.067	0.057	0.050	0.044
0.30	0.300	0.150	0.100	0.075	0.060	0.050	0.043	0.038	0.033
0.20	0.200	0.100	0.067	0.050	0.040	0.033	0.028	0.025	0.022
0.10	0.100	0.050	0.033	0.025	0.020	0.017	0.014	0.013	0.011

[10] Although it is conceivable that not all equally situated competitors would be included in a market technically defined under the Merger Guidelines, we are aware of no instances where this has occurred in practice. Accordingly, we believe the simulations in Table 2 provide valuable insight and allow for good comparisons with historic levels of enforcement.

Table 2-b - UPP Model by Margins and Rivals, Ten Percent Efficiencies

	Rivals								
Margin	2	3	4	5	6	7	8	9	10
0.90	0.900	0.445	0.293	0.218	0.172	0.142	0.119	0.104	0.091
0.80	0.800	0.390	0.253	0.185	0.144	0.117	0.096	0.083	0.071
0.70	0.700	0.335	0.213	0.153	0.116	0.092	0.074	0.061	0.051
0.60	0.600	0.280	0.173	0.120	0.088	0.067	0.051	0.040	0.031
0.50	0.500	0.225	0.133	0.088	0.060	0.042	0.028	0.019	0.011
0.40	0.400	0.170	0.093	0.055	0.032	0.017	0.005	-0.003	-0.009
0.30	0.300	0.115	0.053	0.023	0.004	-0.008	-0.017	-0.024	-0.029
0.20	0.200	0.060	0.013	-0.010	-0.024	-0.033	-0.040	-0.045	-0.049
0.10	0.100	0.005	-0.027	-0.043	-0.052	-0.058	-0.063	-0.066	-0.069

Table 2-b shows the results assuming the 10% standard deduction for efficiencies, which constitutes a level that is rarely seen in practice. Even with this deduction, however, enforcers could still be extremely active, as demonstrated by the extent of red in the table. For example, a merger that results in ten equally situated firms pre-merger (i.e., a ten-to-nine merger) produces a positive UPP as long as the margins are 50% or higher. UPP would also be positive for instances involving six equally situated firms pre-merger with margins as low as 30%. This approach would essentially condemn six-to-five mergers where margins would be considered low to moderate at best. For higher margins, (those usually applicable in differentiated products markets) the approach would be much more aggressive, condemning any merger where there are ten or fewer equally situated competitors.[11] Table 2 thus makes clear that the UPP approach even with the 10% standard efficiencies deduction would mark a substantial break with modern antitrust enforcement.

[11] The simulations do not directly consider diversion to substitute goods outside the market. However, one of the "rivals" can be considered to be an aggregate outside good and thus the model is easily generalized.

III. THE LERNER INDEX, DEMAND ASSUMPTIONS, AND MARKET DEFINITION

Some economists have argued that the market definition exercise should utilize the premerger Lerner Index to derive the demand elasticity facing an individual product.[12] The Lerner Condition states that the demand elasticity facing the product should equal the (negative) inverse of the product's marginal cost. Mathematically, $\epsilon = -1/m$ where ϵ equals the demand elasticity facing the product and m equals the product's margin (price - marginal cost divided by the price).[13] Thus, assuming the Lerner Condition applies and assuming that the product's demand is linear in price, one can estimate the expected loss in sales for an individual product by multiplying the estimated demand elasticity by the SSNIP. For example, if the margin is 50%, the projected demand elasticity will be -2 (1/.5) and multiplying by the SSNIP (say 5%) results in an estimated 10% loss in volume caused by the SSNIP.

Superficially, it would appear that this approach can easily be combined with Critical Loss Analysis ("CLA") to complete the hypothetical monopolist test of the Guidelines. CLA provides a means to determine the loss in volume necessary to make the hypothetical SSNIP unprofitable (i.e. the Critical Loss). Then the Lerner Index can be used to determine whether the projected loss in volume from the SSNIP (i.e., the Actual Loss) will exceed the Critical Loss.[14] In the literature, this approach is combined with the use of critical diversion ratios. This type of approach is what the proposed revisions seem to contemplate. There are, however, several significant problems.

Narrow Markets

First, this type of approach produces extremely narrow markets. Table 3 provides an illustration with a single firm SSNIP ("SFSSNIP"), although the results would be identical for a uniform SSNIP ("USSNIP") if diversions from the SFSSNIP and the USSNIP are assumed to be the same. Table 3 assumes 10 equally situated firms such that 11.1 % of volume will divert to each of the other nine firms when any one of them raises price. The first column lists the range of margins from 10% through 90%. The second column displays the Critical Diversion Ratio for a 5% SSNIP.[15] The third column displays the number of firms (where each firm sells a single product) in the market, which is calculated as the firm hypothesized to raise price plus the number of other firms necessary to achieve the critical amount of diversion listed in column 2. Thus, where one of the ten firms raises price 5% and margins are 10%, three other firms are necessary to

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[12] E.g. Katz & Shapiro, *supra* note 2, O'Brien & Wickelgren, *supra* note 2.

[13] E.g. Farrell & Shapiro, *supra* note 2.

[14] Id.

[15] The critical diversion ratios are taken from Table 1 of O'Brien & Wickelgren, *supra* note 2.

attract at least 33.3% of the volume diverted from the first firm in order for the price increase to be profitable. (Recall each firm only attracts 11.1 % of the diversion.).

Table 3

Margin	Critical Diversion Ratio for 5% SSNIP	Implied # of Firms in Market
90%	5.3%	2
80%	5.9%	2
70%	6.7%	2
60%	7.7%	2
50%	9.1%	2
40%	11.1%	2
30%	14.3%	3
20%	25.0%	4
10%	33.3%	4

As Table 3 shows, the single firm SSNIP produces very narrow markets. With a 10% - 20% margin, the market will be defined to include 4 firms. But once the margin hits 30%, the number of firms in the market drops to 3 so that a merger with those margins will be viewed as reducing the number of competitors from three to two. Once the margin gets to 40% and above, only the merging firms are included in the market. These results are quite dramatic in a situation where there are 10 equally situated firms. A key point to notice here is that even margins of 10-30% produce very narrow markets.

The results become even more extreme if one assumes that each firm's demand is a convex function of its price (and assuming that all other prices do not change). For example, using the same assumptions as above in Table 3 but changing the demand elasticity from linear to constant elasticity would produce a market with only two firms even for firms with 10% margins.[16] In other words, Table 3 would show merger to monopoly for all margin levels for constant elasticity. These extreme results should cause serious reservations as to the appropriateness of assumptions regarding linear or convex demand.[17]

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[16] O'Brien & Wickelgren, *supra* note 2 at Table 2. The critical diversion ratio in Table 2 of O'Brien & Wickelgren is shown as 10.5% assuming a 10% margin. Assuming 10 equally situated firms such that each firm receives 11.1% of diversion from the price increase of any other firm, only one firm is necessary to soak up the 10.5% critical diversion (i.e. 11.1% > 10.5%).

[17] There is language in the proposed revisions that could limit the narrowness of markets produced by the margins-based approach, which is helpful. The proposed revisions suggest that the Agencies will normally include any product in the market that is a closer substitute for one of the products of the merging firms than another product in the candidate market. Proposed Revisions at 4.1.1. However, the language suggests that being an equally situated competitor is not sufficient for inclusion.

Shape of the Demand Curve

Second, relaxing the assumption that demand is linear can alter the results significantly (even assuming the Lerner Condition continues to apply). The literature does recognize that adjustments would have to be made to the standard margins based approach to market definition to account for situations where demand is more sensitive to price increases than decreases (e.g. concave demand). But it has been suggested that there should be a presumption the other way (i.e. that demand is linear) with the burden on the parties to rebut the presumption.[18] The proposed revisions appear to have adopted this approach. But what is the basis to adopt such a burden shifting approach?

The economics literature contains models using all sorts of demand assumptions, including linear, convex and concave. One article describes the various types of demand curves as follows:

> Convex, linear, and concave demand functions can all be found in the economic literature. Perhaps for its simplicity, the linear demand curve is the one usually found in microeconomics textbooks. Convex demand functions often appear in demand estimation where the estimated coefficients have the interpretation of elasticities. These models thus assume, at least locally, that elasticities are constant and that a demand function with constant own-price elasticity is convex. Finally, theoretical models often assume concave demand in order to guarantee that firms' maximization problems are well defined and that the solutions are well behaved.[19]

Figure 1 graphs these various types of demand curves, while Figure 2 shows the concave demand curve with marginal revenue and marginal cost.

Moreover, it is hard to square this "closer substitute" language with the use of a presumption based on margins. The use of the "closer substitute" exception seems inconsistent with the approaches described in the economic literature and its rationale is unclear. If one really believes that the margins can be used to predict demand elasticity and the likelihood that Actual Loss will exceed Critical Loss, there is no reason to include the "closer substitute" language.

[18] Katz & Shapiro, *supra* note 2 at 8-9; O'Brien & Wickelgren, *supra* note 2 at 176.

[19] David A. Mauleg, *Monopoly Output and Welfare: The Role of Curvature of the Demand Function,* JOURNAL OF ECONOMIC EDUCATION (Summer 1994) at 235.

Figure 1

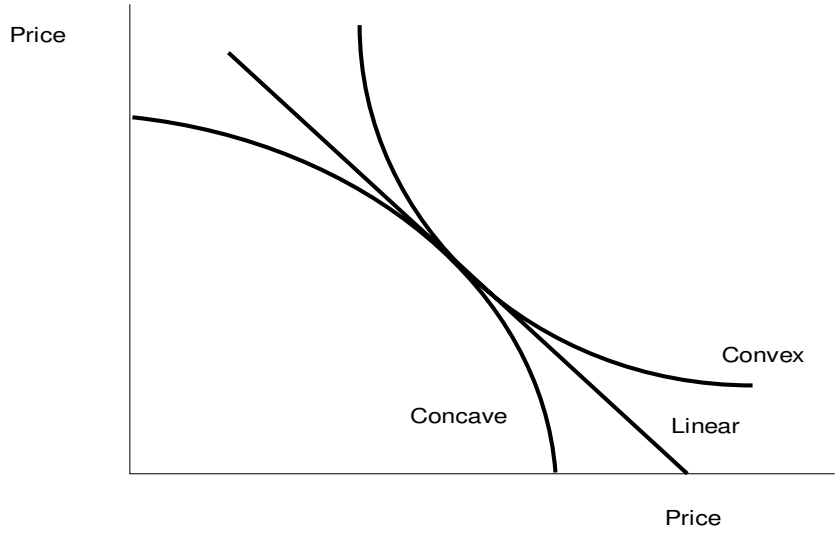
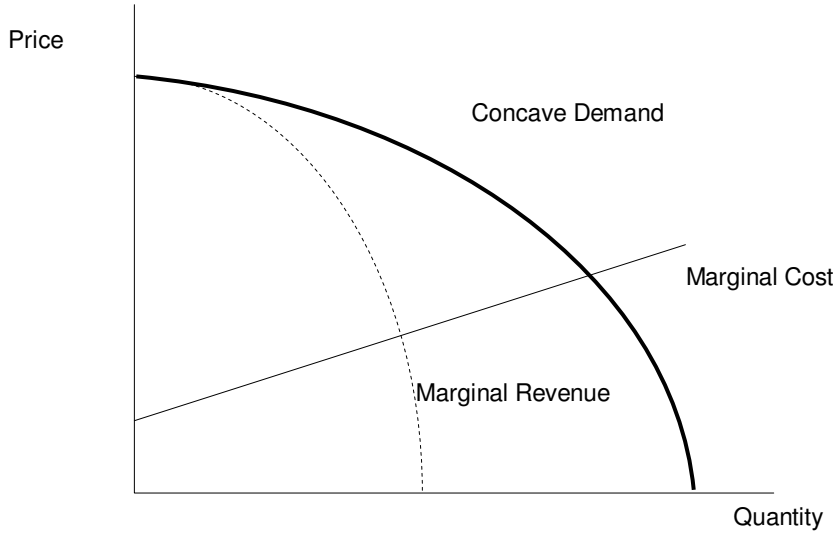


Figure 2



There is no apparent reason to create a presumption that linear or convex are more or less likely to characterize the shape of demand in the real world with respect to any particular product. Given the very narrow markets produced by linear and convex demand assumptions, anticompetitive price increases would have been predicted for a very large

universe of mergers over the last 30 years if demand commonly took these forms. No such evidence exists, suggesting perhaps that concave demand is more common. One could also argue on an intuitive basis that the concave curve is most appealing. With concave curves, substitutes become more prevalent as price rises which is consistent with the notion that higher prices bring in more substitutes for consumers as a rule.

The Lerner Index is Not Empirical Evidence

Third, contrary to what some economists have claimed, demand elasticity estimates derived from the Lerner Condition do not constitute empirical evidence and should not be considered the gold standard of evidence. The Lerner Condition presents a theoretic relationship between margins and elasticity given certain assumptions including that demand and supply curves are differentiable. Empirical evidence involves observations that support the theoretic predictions. There are no observations or studies showing that the Lerner Condition's theoretical predictions of the relationship between margins and demand have general applicability to the real world.[20] And there is good basis to think the Lerner Condition will in general not apply.[21] Moreover, the Lerner relationship holds even in theory for only trivial changes in price, which are inconsistent with a SSNIP (i.e. small but ***significant*** and non-transitory increase in price), which is why further assumptions relating to the shape of demand and constant diversion ratios are necessary to draw conclusions about the relationship between margins and demand.

Single Firm SSNIP

Fourth, the diversion based approaches in the literature use either a single firm SSNIP where only one of the merging firms raises price, or use an assumption that diversion for a SFSSNIP is the same as for a uniform SSNIP.[22] The latter appears to be assumed in example 5 of the proposed revisions. Emphasis of these approaches in merger enforcement (which is arguably contemplated by the proposed revisions) would represent a significant departure from past practice, and have significant issues associated with them in addition to the fact that they produce extremely narrow markets.[23] The

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[20] To say that the Lerner Index does not apply is not the same as saying firms are not maximizing profits. The diversion based approaches in the literature assume profit maximization (which is not challenged here) as wells as differentiability of demand and supply curves, and linearity or convexity in demand (which are challenged).

[21] These issues are spelled out in more detail elsewhere. David Scheffman & Joseph J. Simons, *Deconstructing the Analysis of Unilateral Effects for Differentiated Products: Theory, Assumptions and Relevant Research*, ANTITRUST SOURCE (April 2010), available at http://www.abanet.org/antitrust/at-source/10/04/Apr10-Scheffman4-14f.pdf .

[22] Katz & Shapiro, *supra* note 2, O'Brien & Wickelgren, *supra* note 2.

[23] The problems associated with the SFSSNIP are discussed in the appendix to Malcolm B. Coate & Joseph J. Simons, *Critical Loss vs. Diversion Analysis: Clearing Up the Confusion,* CPI ANTITRUST CHRONICLE (December 2009), available a http://www.paulweiss.com/files/Publication/049a8b58-fcca-

SFSSNIP approach is essentially a unilateral effects analysis and can produce very narrow markets which are not capable of either a unilateral effect or coordinated interaction. For example, suppose a merger of Firm A and B would not allow the combined firm to raise prices profitably for either A and B jointly or for only one of those products. Suppose further that a hypothetical monopolist of Firms A, B, and C would be able to profitably raise the price of Firm A's product only (i.e. not uniformly). In this case, there is no unilateral effect possible by definition of the example and collusion is not feasible without side payments from Firm C to the merged firm. Defining markets in this way is just not helpful unless one is interested in gerrymandering market definition to try to take advantage of what is left of the *Philadelphia National Bank* presumption.

Diversion Ratios

With respect to a USSNIP, the diversion based approach in the literature assumes that the diversion for a SFSSNIP is the same as a USSNIP. In other words, this approach assumes that diversion from A to B is the same when only the price of A rises and when the price of B goes up as well. So effectively, the assumption is that when A raises price, there is diversion of X to Firm B. When Firm B also raises price, that diversion of X that went from A to B now goes back to B. It is constrained from going elsewhere (eg. to Firm C) by assumption, which seems to be an awfully strong assumption.[24] In addition, the diversion based approach in the literature assumes that diversion ratios are constant, and there is no particular reason to believe that is true either.

III. CONCLUSION

The proposed revisions to the Guidelines have much to commend them. The proposed revisions, however, seem to suggest that the agencies will use the existence of high margins to create a presumption of lack of demand responsiveness, narrow markets, and/or market power. The use of margins in this way would be controversial and could dramatically expand the universe of mergers subject to challenge. At the same time, there is little evidence to support such an expansion. In addition, because the proposed revisions state that efficiencies will not save a merger to monopoly or near monopoly, the margin based presumption on market definition could produce sufficiently narrow markets to essentially write the efficiencies defense out of the Guidelines. My recommendation is that the proposed language relating to margins be withdrawn.

4451-8bd1-0e0d2f7937c2/Presentation/PublicationAttachment/0c400796-31c0-413d-90d3-0f0f57c0fd9c/Simons%20GCR%20Article.Dec%2009.pdf. The issues associated with an assumption that diversion is the same for SFSSNIPs and across the board SSNIPs are discussed in the body of the same paper and in Malcolm B. Coate & Joseph J. Simons, *Critical Loss v. Diversion Analysis: Another Attempt at Consensus,* CPI ANTITRUST JOURNAL (April 2010), available at http://www.paulweiss.com/files/Publication/732dbd95-8e4b-4fea-b9ac-3972cea3cf6d/Presentation/PublicationAttachment/d6a14972-ca90-4342-8f9b-39b438d51c14/PW_CPI_Apr-10.pdf.

[24] *See* articles cited in note 23 *supra* for a fuller explanation of this issue.