Reducing Rivals Prices: Government-Supported Mavericks as New solutions for Oligopoly Pricing

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Reducing Rivals' Prices: Government-Supported Mavericks as New Solutions for Oligopoly Pricing

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Abstract

One of the most important market imperfections in modern capitalism, and surprisingly one of the most under-regulated, is oligopoly pricing (conscious parallelism). Only a few suggestions have been made over the years to regulate oligopoly pricing, and all of them pose serious obstacles to their efficient application. Consequently, oligopoly pricing is left to the workings of the market (or pure luck), even though the market's limited regulatory role is acknowledged. This article proposes a novel method for regulating oligopoly pricing by way of introducing a government-supported maverick into an oligopolistic industry for a limited time. The maverick will price its products at competitive or near-competitive levels, based on considerations of consumer or total welfare. Its rivals will follow its pricing strategy or incur significant losses, and possibly exit the market. As will be shown, the proposal may significantly reduce allocative inefficiency by reducing the welfare losses from supra-competitive pricing. The threat of intervention might be sufficient, in itself, to reduce the problem of oligopoly pricing. It may also reduce productive inefficiency by combatting the problem of inefficient plant and firm sizes. This article analyzes the market conditions that must exist for this proposal to be operational and indicates its benefits as well as its costs and limitations. More subtle versions of the model, such as granting tax exemptions to new entrants and reducing transportation costs into the market, may also potentially reduce oligopoly pricing.

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Table of Contents

I. Introduction

II. Drawbacks of Other Proposed Solutions

III. The Maverick Model
3.1 General
3.2 Necessary conditions
3.3 Three variations

IV. Welfare Effects of the Maverick Model
4.1 Direct effect on allocative efficiency
4.2 Indirect effects on allocative efficiency in other oligopoly industries
4.3 Post-Maverick period allocative efficiency
4.4 Effects on productive inefficiency
4.5 Reduction of cartelistic activity
4.6 Effects on Dynamic Efficiency

V. The Details of the Maverick Model
5.1 Optimal price levels set by the maverick
5.2 The temporal element: length of subsidy
5.3 Verifying true costs
5.4 Compensation of the maverick
5.5 Procedural and discretionai powers

VI. Limitations of the Model
6.1 Governmental intervention
6.2 Perceived governmental favoritism
6.3 Distortion of competition
6.4 Funding

VII. Conclusion
One of the main market imperfections, and surprisingly one of the most under-regulated, is oligopoly pricing. Oligopoly markets are characterized by a small number of firms that are protected by high entry barriers, which produce a high proportion of the industry’s output. The hallmark of oligopoly is the presence of strategic interactions among rival firms. Though each firm may independently decide its strategic decisions, its rational decisions must take into account the anticipated reaction of its rival firms to its conduct. Such coordinated conduct, referred to in what follows as conscious parallelism or oligopoly pricing, arises simply through independent rational behavior and does not amount to illegal collusion. Oligopoly pricing may impose significant welfare losses on society. Market conditions that may facilitate oligopoly pricing, mainly a small number of competitors protected by high barriers to entry and relatively homogenous products, exist in many industries even in a large market such as the U.S. To give but one example, the gas retailing industry

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1 The significant economic implications of oligopoly pricing have led several jurisdictions to lead special inquiries on the subject. See generally British Monopolies Commission, Report on Parallel Pricing, 1973, Cmnd. 5330, at 38 (indicating the significant influence of oligopoly pricing on industry performance and social welfare, yet concluding that “it would be difficult to find a ready means of introducing more competition”; Canadian Report of Royal Commission on Corporate Concentration (Ottawa: Printing and Publishing Supply and Services Canads, 17 March 1978); Oligopoly, OECD Committee on Competition Law and Policy, DAFFE/CLP(99)25 (1999); Phil Caldwell Neal, On Implementing a Policy of Deconcentration, in Industrial Concentration: The New Learning, 377 (Harvey Goldschmid et al. eds., 1974).


3 Conscious parallelism can be best described as actions of potential rivals that are based on the tendency, inherent in oligopolistic markets, to coordinate policies spontaneously, and not as part of an agreement. Although conscious parallelism is less profitable than collusion, it is more stable, and it is legal.

4 See Alexis Jacquemin and Margaret E. Slade, Cartels, Collusion and Horizontal Merger, in Handbook of Industrial Organization, supra note 2, at 415. The fact that high entry barriers exist in such oligopolistic markets implies that contestability does not provide sufficient pressures on oligopolists operating in the market to lower their costs to competitive or near competitive entry, and that oligopolists do not have to engage in limit entry pricing or other price-reducing strategies in order to deter entry. See also, William Baumol et al., Contestable Markets and the Theory of Market Structure (1982).

5 See Neal, supra note 1. See also, Ethyl Corp. v. FTC, 729 F.2d 128 (2nd Cir. 1984) (discussing that characteristics of the four-firm industry including high concentration, small likelihood of entry, inelastic demand, and product homogeneity led to a natural oligopoly which was prone to price coordination); Reading Indus. v. Kennecott Copper Corp. 477 F. Supp. 1150, 1157 (S.D.N.Y. 1979) aff’d 631 F.2d 10 (2d Cir. 1980), cert. denied 452 U.S. 916 (1981) (“In a highly
exhibits market characteristics which are conducive to oligopoly pricing: price transparency, product homogeneity, regulatory barriers to entry, and an oligopolistic market structure with few large operators.6

Despite the significance of the oligopoly pricing problem, antitrust does not have any efficient tool in its arsenal to combat it directly, without upsetting established notions of market conduct or taxing the administrative system beyond its regulatory powers.7 Antitrust enforcement currently focuses on the question of whether oligopoly pricing can be regarded as the result of a collusive agreement (tacit or explicit) among competitors that violates the antitrust laws. Conscious parallelism, in itself, does not violate the antitrust laws. In Theatre Enterprises Inc. v. Paramount Film Distributing Corp.,8 for example, the Supreme Court clearly stated that “this Court has never held that proof of parallel business behavior conclusively establishes agreement or, phrased differently, that such behavior itself constitutes a Sherman Act offense.”9 Thus, prosecution efforts focus on showing evidence of an agreement that cannot be simply explained by conscious parallelism, rather than on the effects of such conduct. Only a few suggestions have been made over the years to regulate oligopoly pricing. All suggestions pose serious obstacles to their efficient application.10

To combat oligopoly pricing, this article suggests a radical solution which involves government support of one of the firms operating in the oligopolistic industry.
in order to create market conditions that prevent oligopolists from exercising the power to price above competitive levels. The essence of this proposal is that one of the oligopolists will act like a maverick which will not conduct its behavior in accordance with other firms. Rather, it will base its pricing and output strategy on considerations of total or consumer welfare. Rival oligopolists would need to follow its pricing strategy, or they would suffer great losses of market shares and possibly exit the market. This proposal allows firms to compete vigorously on the merits without directly limiting their decision parameters. No firm is forced to act in a manner that is against its incentives, and there is no necessary ongoing control except for the prices charged by the maverick.

The central insight of the proposal is that the existence of a single competitive firm can dramatically affect the competitive conduct and performance of an entire industry. It accomplishes the regulatory goal by harnessing and fostering the welfare-enhancing effects of competition. The maverick firm indirectly ensures that the other firms will meet its regulated prices. The compliance of the other firms is assured because competition forces them to match the offers of the maverick.

As will be shown, the proposal may significantly reduce allocative inefficiency in the industry in which the maverick operates. Furthermore, it creates several important indirect benefits. First, the threat of governmental intervention might, in itself, create incentives for oligopolists operating in other markets to reduce the level of oligopoly pricing in their markets. Second, it may be used as a tool to combat inefficient scales of production or inefficient fringe firms. Third, it may reduce the ability of firms to collude. However, given the high level of governmental intervention involved in implementing the model, it should only be used where welfare effects are significant and traditional antitrust tools are not effective. Nonetheless, less interventionary variations of the maverick model, such as subsidizing transportation costs or granting tax exemptions to new competitors, may also be applied to combat oligopoly pricing.\footnote{See discussion in Section 3.3 below.}

The rest of the paper is organized as follows: The second chapter briefly reviews other proposals to regulate oligopoly pricing, to emphasize the lack of effective tools currently available. The third chapter provides a diagrammatic and formal analysis of the maverick model. Three alternative strategies are discussed: a government-operated maverick, a government-subsidized new maverick firm, and a government-subsidized existing oligopolist. In chapter four, the welfare effects of the model are analyzed. Chapter five discusses the model's details, such as the optimal pricing level, the temporal element, and the height of the subsidy given to the maverick. Chapter six discusses and attempts to contend with some of the model's limitations. Finally, chapter seven concludes the paper.
II. **Drawbacks of Other Proposed Solutions**

Most commentators concede that oligopoly pricing cannot be dealt with by simple prohibition of conscious parallelism. Application of the existing laws would raise severe problems of devising an appropriate remedy. This point was expressed by Justice (then judge) Breyer, who stated that oligopoly pricing does not violate the Sherman Act "not because such pricing is desirable (it is not), but because it is close to impossible to devise a judicially enforceable remedy for 'interdependent' pricing. How does one order a firm to set its prices *without regard* to the likely reactions of its competitors?" Such a prohibition would also raise significant issues of fairness, as oligopolists would engage in an illegal activity when basing their pricing decisions on existing market conditions.

Given the inability of current antitrust tools to regulate oligopoly pricing, surprisingly few suggestions have been made to provide solutions to this problem. Proposals include direct price regulation, restructuring of oligopolistic markets, and price freezing. Although this is not the place to analyze these proposals in depth, this chapter sketches the main benefits and drawbacks of each, to show the lack of an efficient solution. Against this backdrop, the following chapter analyzes the proposed maverick model.

Direct price regulation requires courts to fix prices for oligopolists at a "reasonable" or "competitive" level. Such a remedy raises important issues of competence and of monitoring. Writing and implementing a price command puts the antitrust courts directly in the position of price-controllers, for which they are unsuited. Such pricing may also be extremely complicated if firms have different cost structures or differentiated products. Most importantly, given the incentives of oligopolists to set prices at higher than competitive levels, price regulation would entail ongoing monitoring of the prices of all products in the market.

Selective restructuring of persistently non-competitive oligopolistic markets has

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13 Clamp-All Corp. v. Cast Iron Soil Pipe Institute, 851 F.2d 478, 484 (1st Cir. 1988).

been proposed, from time to time, to combat oligopoly pricing. The essence of these proposals is that since oligopolistic interdependence is based on high concentration levels, reducing such levels by way of breaking up existing rivals into smaller competing units would hinder the natural conditions that are required in order to sustain oligopolistic interdependence. A variation on this proposal involves inhibiting the creation of market structures that predispose firms to oligopolistic interdependence.

Numerous obstacles limit the efficient and effective application of the restructuring solution. The litigation process is not well designed to make accurate predictions about whether a structural change will yield a price increase (due to higher costs) or a price decrease. More importantly, some concentrated market structures may, in fact, be efficient. Absent some unusual deterrents to competitive entry (such as government-created entry barriers), markets are generally concentrated due to minimum efficient scales of operation. A program of combating oligopoly by divesting oligopolistic firms might result in a loss of productive efficiency that may well exceed the social costs caused by oligopoly performance. The program may also require ongoing regulation, where the natural tendency of the industry is to reach sizes that minimize production costs. In addition, restructuring may be very costly in terms of public and private resources consumed in preparing, defending, and litigating issues. Accordingly, the cure can be worse than the disease.

William Bishop suggested a novel and creative remedy to the problem of oligopolistic coordination that builds on the fact that oligopolists are potential competitors in the market in which they operate. Under his proposal, once it is found that an industry has engaged in supra-competitive pricing, some administrative agency will freeze the price bid by each oligopolist for a considerable period that is “long enough that any firm bidding prices substantially higher than the lowest bidder would suffer severe losses-and perhaps bankruptcy”. A high price would then become perilous if significant rivals charge a lower price. To put all firms in the same initial

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19 Id. at 315.
position, the administering agency would presumably require each firm to submit its future market price in a secret "bid" to the agency and would then promulgate the results to be effective on a uniform starting date.

While this proposal has some interesting features, it suffers from several serious drawbacks, some of which are acknowledged by Bishop himself. Most importantly, the proposal involves a high degree of ongoing intervention in the market since the antitrust authorities must prevent all firms from charging lower prices than their bid price. Moreover, the proposal creates a strong possibility of concentration, thus increasing bankruptcies in markets with significant entry barriers. In addition, it does not allow firms to reduce costs based on productive efficiency realized during the price freeze (due, for example, to a new innovative production technique). Finally, it does not allow firms to react effectively to new market entrants. Other problems, such as the distortion of competition among buyers, remain.

III. The Maverick Model

3.1 General

The proposed solution seeks to imitate the conduct of a maverick firm that reduces the incentives and the ability of its rival oligopolists to coordinate their prices at supra-competitive levels, with one important difference: this maverick's pricing decision is based on total or consumer welfare considerations instead of its own profit-maximizing considerations. The model requires government support of one of the firms operating in the oligopolistic market (the "maverick") for a limited period. During this period, the maverick adopts a low-price strategy to which its rivals must react in order to compete effectively. Oligopolists that will not reduce their prices will eventually lose some, or even all, of their market share to the maverick or to other competitors that have followed the maverick's lead, depending on their individual demand curves and the capacity constraints of their rivals, and may even need to exit the market.

To illustrate how subsidizing a maverick can enhance competition and increase welfare, consider the following example. Let us assume an industry with an almost perfectly homogenous product in which three firms A, B, and C operate. Further assume that all firms' marginal cost of production is $10. In the pre-maverick situation, the three firms engaged in conscious parallelism, and the equilibrium price charged for each widget was set at $13. Each firm enjoyed a market share of 33.3%. The government enters into an agreement with A in which A agrees to sell its widgets at its marginal

20 Id. at 328-334.
21 Id. at 329-330.
22 PHILLIP E. AREEDA, ANTITRUST LAW- AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION, Volume VI Section 1432d (rev. ed. 1996).
cost \((P=MC=$10)\), provided that the government pay it an additional $3 (or less) per unit sold.\(^{23}\) Assuming A can expand its output in order to meet increased demand for its products, B and C will have to reduce their prices in the maverick period to match A’s price ($10) or lose their market shares. Price will be set near the level that it would have been set in a competitive market. As explained below, in the post-maverick period the equilibrium price will be set above the maverick price, but below the pre-maverick price level.\(^{24}\) Diagram 1 graphically illustrates the pre and post-maverick price levels.\(^{25}\)

![Diagram 1: The Effect of the Maverick Model on Price Levels](image)

One of the important features of the proposed model is that it does not necessarily directly affect the cost structures of firms or the market structure.\(^{26}\) Rather, it affects the profitability of specific pricing strategies under given market conditions. Moreover, the model interferes only with the pricing decisions of the maverick firm by creating an upper limit on the oligopolistic price. This, in turn, creates incentives for all other oligopolists to lower their coordinated price and compete vigorously on the

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\(^{23}\) See Section 5.4 below for an analysis of the height of the subsidy the government must pay A in order to induce it to cooperate with it and assume the role of the maverick firm.

\(^{24}\) See Section 4.3 below.

\(^{25}\) See Section 4.3 below for discussion of post-maverick price levels.

\(^{26}\) See Section 4.4 below for discussion of the use of the model in order to affect the market structure or the cost structures of firms.
merits. The effect is similar, in many respects, to the lowering of tariffs or other barriers for potential competitors.\footnote{27}

A’s incentives to cooperate with the government raise an interesting issue. Why would A agree to play the part of the maverick firm if it could continue to enjoy high profits by engaging in collusion or conscious parallelism absent government intervention? The answer is primarily attributable to the threat of government entry into the market by other means. Each competitor has two conflicting incentives. On the one hand, if all the oligopolists decline to cooperate with the government they could avoid the lowering of prices for all (at least until the government finds another way to enter the industry). On the other hand, if A does not agree to cooperate with the government, but one of its competitors does (due, for example, to the ability to realize scale economies by increasing output and increasing their market share in the long run), then A will incur great losses. The financial incentives offered by the government for the part of the maverick allow the chosen maverick to avoid all or most of the losses that would fall on its rivals.\footnote{28} Since A cannot ensure that its rivals will not assume the maverick role, its incentives to assume the role will be largely affected by the presumed incentives of its rivals to become mavericks. Importantly, in the long run, all firms might be better off if one of them agreed to cooperate with the government. Otherwise the government might seek alternative ways to enter the industry, such as establishing a new competitor or subsidizing the entry of a new foreign competitor.\footnote{29} Such a scenario might lead to a reduction in overall profits for all incumbent oligopolists if capacity is increased.\footnote{30} Accordingly, each of the incumbent oligopolists will have an incentive to play the maverick role in order to avoid such private losses. The incentives of firms to assume the maverick role also depend on their relative position in the industry, their relative efficiency, the costs of being labeled as a cooperator with the government, and other benefits offered by the government, such as financial aid in adding capacity, as analyzed below.

\footnote{27} Nonetheless, new entry need not always reduce price to competitive levels. If new entrants are few and oligopolistic coordination is possible, new entrants may have incentives to participate in the coordinated scheme rather than reduce prices to competitive levels. Incumbent firms, recognizing this incentive, will accommodate new entrants in the market by reducing their own output.

\footnote{28} For discussion of the level of compensation of the maverick see Section 5.4 below.

\footnote{29} See Section 3.3 below.

\footnote{30} \textsc{Jean Tirole, The Theory of Industrial Organization} 218-21 (1994). This factor may also reduce disincentives to cooperate with the government in a continuous game where cooperation with the government is marked by other businessmen as defection or cheating.
Diagram 2: The Effect of the Maverick Model on Firms' Profitability

Diagram 2 illustrates the incentive mechanism that induces firms to cooperate with the government and assume the role of the maverick firm. The diagram charts the profit levels of all the firms operating in the industry in the pre-maverick and post-maverick situations. Curves A, B, and C plot the per unit profit levels of the oligopolists in the example above. The point of intersection of the axis illustrates the total average per unit costs of these firms. Curve A illustrates the profit levels of the maverick firm. Its marginal revenue is higher than the price, due to the governmental subsidy. Although its profits do not necessarily reach the levels it reached under oligopoly pricing, it is more profitable than its rivals. Curves B and C represent the profit level of Firms B and C, which will not make any profit once the maverick firm expands. It is easily seen that the profit levels of firms B and C drop significantly, even if not necessarily below their total average cost. While it is difficult to precisely predict the level of lost profits of all firms operating in an industry, especially where cost structures differ from one firm to another, the overall assumption of the model is easily verifiable: risk-averse businesspeople will have incentives to cooperate with the government.

3.2 Necessary Conditions

Three conditions must exist for other oligopolists to follow the maverick's pricing strategy. First, the maverick must create a credible threat to serve consumers that were previously served by its rivals, in case its rivals do not follow its conduct and reduce their prices accordingly. It must therefore possess sufficient capacity or should be able to add sufficient capacity to serve all or most of the demand it will take away from its rivals. Owning sufficient capacity may be costly, however, since once

\[ \text{Profit} \]

\[ \text{Total Average Cost} \]

\[ \text{Loss} \]

\[ \text{Beginning Time} \]

\[ \text{Expansion of Maverick Period} \]

\[ \text{End of Maverick Period} \]

\[ \text{Equilibrium} \]

\[ \text{Time} \]
expansion occurs and competing oligopolists realize that the maverick is reducing their profits, they will likely price their own output at the competitive level. The maverick will then lose some of its sales. Some of its installed capacity will be underutilized, and sunk costs might be significant.

Several conditions may, nonetheless, reduce the need for or the costliness of additional capacity. If sunk costs are not significant, the maverick may sell some of its additional capacity when other firms match its prices. Alternatively, oligopolists may anticipate the severe impact of entry with large scale on total industry output and on price. Added capacity may also pose a serious threat to incumbent oligopolists, especially if significant economies of scale exist over the whole or a large portion of demand. Once the maverick expands its capacity, the oligopolists will have to accommodate a large-scale rival, and reduce their market shares accordingly in the post-maverick period. If the expansion allows the maverick to realize scale and learning economies not realizable by incumbent oligopolists, it might even have incentives to reduce its prices in the post-maverick situation below the levels that they can profitably match, given their higher costs of production. In such cases, the threat of increased capacity alone may act as a stimulator for oligopolists to reduce prices to a lower level based on current costs of production.

The above analysis is similar, in many respects, to that of the entry of a new competitor with a cost advantage. One important difference exists. Under the maverick model, the incumbent oligopolists cannot adopt a retaliatory strategy against the maverick in order to deter expansion or new entry. It cannot be assumed that the government will be deterred from expansion or entry by the risk of sunk costs alone. The only option open to competitors is to accommodate the maverick and adopt a comparable pricing and output strategy.

The second condition that must exist is relative product homogeneity. If each firm enjoys niche demand for a branded or a highly differentiated product (i.e., its residual demand curve is relatively inelastic), the price of the maverick’s product may have to be reduced considerably in order to significantly affect the demand for competing products. Nonetheless, if scale economies are prevalent and significant, a reduction in demand for a differentiated product caused by the much lower maverick prices may critically affect the profitability of its competitors. Under such a scenario, the threat of low prices alone might be sufficient to induce a price reduction.

The third condition dictates that the duration of the product’s life-cycle should be longer than the time it will take the maverick to expand its capacity. In other words, the “game” is a continuous one. In a one-shot game in which a new product emerges, the competitors do not have incentives to reduce their prices. However, in a continuous game, their incentive is to maintain or even to increase their profits and market shares.
Such conditions existed, for example, in *E. I. du Pont De Nemours and Co. and Ethyl Corp. v. FTC.*\(^{32}\) The relevant market was lead-based antiknock compounds, used to prevent engine "knock", the premature detonation of gasoline in the engine's cylinders. The market had several characteristics that were conducive to oligopolistic coordination. During the relevant period, only four firms operated in the market with two of them dominating the industry, and there were no significant imports into the U.S. Thus, the industry was highly concentrated. The two larger firms had similar cost structures, and the product was relatively homogenous. The product had no reasonably close substitutes and demand was relatively inelastic.\(^{33}\) In addition, all firms had substantial excess capacity due to a significant drop in demand which was caused by a change in governmental regulation.

The FTC claimed that during the relevant period the oligopolists substantially eliminated price competition among themselves and charged uniform supra-competitive prices. The absence of competition was not traced to an explicit agreement, but rather to oligopolistic coordination that was facilitated by several practices that were employed by all the oligopolists, such as the adoption of most-favored-customer provisions and uniform delivered pricing. These facilitating practices had been used to overcome potential obstacles to coordination that resulted from the fact that buyers were large and sophisticated and transportation costs differed significantly. The FTC lost its case, *inter alia,* since oligopoly pricing, in itself, was not considered a violation and since the facilitating practices were adopted when there was no competition (only one firm operated in the market), so that it could not be assumed that their purpose was to reduce competition. Accordingly, in the opinion of the court, the conduct was not inherently collusive, coercive, predatory, restrictive, or deceitful.\(^{34}\)

The lead anti-knock industry would have been a perfect candidate for the adoption of the maverick model, had it not produced lead-based products.\(^{35}\) The industry suffered from oligopolistic coordination which set prices at supra-competitive levels. Each of the four firms had the ability to serve a much larger portion of market demand than it served due to significant excess capacity, thus, creating a credible threat to take away market shares of its rivals, if they didn't match its price. The product was

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\(^{34}\) *See* Ethyl, 729 F.2d at 140.

\(^{35}\) Yet the FTC still pursued the case. A court victory would have meant that prices for anti-knock products would have been reduced.
relatively homogenous, and the game was a continuous one. Government-induced price reductions would have served to significantly reduce price levels in the industry.

3.3 Three Variations

The government may choose one of three options to create a maverick:
(i) Creation of a new entrant or acquisition of an existing oligopolist that would be controlled by the government. (ii) Subsidization of a new entrant. (iii) Subsidization of an existing oligopolist.

The first option suffers from four main drawbacks. First and foremost, it requires governmental operation or even the establishment of a new market player, for which the government has no expertise. Although the government might hire the required personnel to operate a competitive firm, this would be costly. Moreover, studies of government-owned enterprises generally reveal that they are much less efficient than privately owned enterprises due to weaker incentive mechanisms. Second, introduction of additional capacity, where the government establishes a new competitor, may increase the problem of an over-crowded industry. Third, a new entrant might face entry barriers such as limited distribution channels and brand name recognition. Finally, if sunk costs are significant (as is usually the case in oligopolistic markets), it might be very costly to exit the industry once the government’s task is completed. This option does, however, reduce monitoring costs that result from information asymmetries between the government and the maverick in the second and third options.

The second option, a government-subsidized new entrant, solves the problem of a government-operated company. It also significantly reduces the level of governmental intervention in the market. At the same time, it may raise the problem of adding capacity to an over-crowded market and entry barriers may also limit its

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36 Ian Ayres and Peter Cramton argue that affirmative action bidding preference in the Federal Communications Commission, in which the government subsidized the participation of new bidders, has induced established bidders to bid more aggressively. Ian Ayres & Peter Cramton, Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition, 48 STAN. L. REV. 761 (1996). Similarly, the Chilean government subsidized some of the bidders for its telephone lines. The inherent characteristics of a bidding process ensure, however, that the benefits of increased competition will be passed on to consumers.


38 In some situations antitrust laws can be applied to reduce such barriers. For example, where all the existing distribution channels are controlled by incumbent oligopolists through a set of exclusive dealing contracts and high obstacles prevent the creation of new distribution channels, antitrust principles can be applied to mandate the use of existing distribution channels by new entrants or to reduce entry barriers into them.

39 See discussion in Section 5.3 below.
applicability. This option also creates problems of informational asymmetries. Where the government chooses to subsidize a foreign firm, other political and economic obstacles may arise.\footnote{40}

The third option, an incumbent oligopolist subsidized by the government, has the greatest potential to work best in most situations. It solves all of the drawbacks of the government-controlled maverick option while reducing intervention in the market. Similar to the second option, it suffers from the informational asymmetry problems that are discussed in Section 5.3 below.

Although the third option is the most efficient one in most market settings, the remaining two can be used where no domestic firm agrees to assume the role of the maverick firm, or the compensation it demands for its cooperation is extremely high. In fact, the threat of using one of the two remaining options might increase the incentives of domestic incumbents to cooperate with the government.

The model has many practical variations that require less direct governmental intervention than subsidizing an existing competitor. One example involves subsidizing some of the costs that prevent potential competitors from entering oligopolistic markets and competing away oligopolistic profits. Where transportation costs are significant, subsidizing modes of transportation into an oligopolistic market may help combat oligopolistic conduct. Similarly, granting tax expenditures (in the form of subsidy payments, tax exemptions, or tax credits) to new firms that enter an oligopolistic market or to existing competitors that invest in infrastructure and increase output, may also reduce oligopolistic pricing.\footnote{41} In fact, tax expenditures have been used in the electricity generation industry to combat market imperfections and to increase competition.\footnote{42} These cost reductions should be high enough to enable potential competitors to earn rewards similar to those earned in a competitive industry. Alternatively, if potential entrants are located in other industries and entering the oligopolistic market implies relocation (fully or partially) of their productive functions, the cost reductions should enable them to earn at least what they have previously

\footnote{40} For one, subsidizing a foreign competitor may reduce domestic welfare by transferring production abroad.

\footnote{41} See Ian Ayres & John Braithwaite, Partial-Industrial Regulation: A Monopsony Standard for Consumer Protection, 80 Cal. L. Rev. 13, 69 (1992) (discussing the possibility of bribing OPEC producers to increase output and price efficiently or giving a bonus to the firm that cut prices or increased output the most).

\footnote{42} See Lon L. Peterson, The Economic Analysis of Tax-Exempt Debt in the Electric Power Industry, 18 State Tax Notes 2000. Peterson analyzes federal policy that reduces the opportunities for municipalities to use tax-exempt debt for the acquisition, expansion and management of electric generation, transmission and distribution systems, in order to "level the paying field" for new competitors. However, tax policy is rarely used to remedy market imperfections.
earned. The effectiveness of such cost reductions is, however, limited by the scope of market demand and scale economies. Where market demand cannot support additional firms, reduction of entry costs may have a short-term dynamic effect, replacing old firms with new ones, with no significant long-term effect on the price-cost equilibrium. Also, since the government does not require as a condition for its subsidy that the subsidized firm reduce the market price, it might well be that the new market price will still be supra-competitive, as the incumbent firms will simply accommodate new entry.43

IV. Welfare Effects of the Maverick Strategy

4.1 Direct Effect on Allocative Efficiency

Allocative efficiency is positively affected by the maverick’s price-reducing strategy, as price is reduced and output is increased. Cost reductions to consumers are much higher than the subsidy paid to the maverick since the government must only compensate the chosen maverick for its participation, rather than all the firms operating in the market.44 Further, as will be shown in Section 5.4 below, due to the underlying features of the game, the subsidy given to the maverick might be lower than its price reduction. The need to subsidize the maverick, however, increases the attractiveness of applying the model in an industry in which the chosen maverick does not currently supply more than 30-40% of the market.

4.2 Indirect Effects on Allocative Efficiency in Other Oligopoly Industries

An important benefit of the maverick model involves its indirect price-reducing effects on other oligopolistic industries in which the government does not intervene. Once the government creates a credible threat to intervene in oligopolistic industries by way of a government-supported maverick, oligopolists operating in other industries may reduce their price levels and set them closer to the competitive level in order to prevent direct intervention in their industry. The explanation is quite simple. Assuming that oligopolists are risk-neutral,45 they may find it profit-maximizing to adopt pricing strategies that deter intervention, if the risk created by such intervention

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43 It is also noteworthy that variations on the idea of subsidizing some commercial activity by the government in order to overcome some market imperfection might justify governmental purchase of patents. This, however, is a topic for a different paper.

44 This argument is based on the assumption that the maverick will not supply all the additional demand that results from the lowering of price. Rather, all the incumbent oligopolists will expand proportionally to their previous market shares. If necessary, the government may limit the number of units subsidized by it.

45 Of course, if they are risk-averse they will have even stronger incentives to reduce their prices.
is higher than their expected profits. In their pricing decisions, incumbent oligopolists will consider the credibility of the risk that the government will support a maverick in their industry and the risk to their profit level that a maverick firm will create. Both factors are influenced, inter alia, by the cost-profit difference in the industry. The expected loss of profit of each firm will be calculated based on the probability that the government chooses to intervene in the industry times the probability that another firm will be chosen to act as the maverick. If the risk is significant enough, then the price at which intervention is assumed creates an upper limit on the equilibrium price. As different firms might have different evaluations of the risks posed by governmental intervention, the equilibrium price will be based on the lowest price calculated by any oligopolist necessary to deter intervention. Such an outcome is desirable, as it reduces allocative inefficiency without direct intervention in the market.

As an example, assume similar market conditions as noted above: three firms, a homogenous product, conscious parallelism, and the oligopoly equilibrium price is $13 per unit. For simplicity, assume that all firms have marginal costs of production of $10 per unit. If the oligopolists believe that there is a real risk of government intervention in their industry if the price-cost margin is higher than 20% (e.g. a 75% risk of intervention) and a 66% risk that a rival oligopolist will be chosen to act as the maverick, they will have a collective incentive to set the equilibrium price at $12.40 per unit. This price will serve as an upper limit on their coordinated price.

Still, the possibility of a maverick intervention might have limited effect on some oligopolistic industries. First, the price-cost margin may not be sufficiently high to create a risk of governmental intervention. However, such industries do not raise strong concerns as the welfare losses they create are by definition low. Second, firms might assume a low risk of governmental intervention. Several successful maverick schemes may change this significantly. Third, some firms may believe that a maverick will have limited effect, if any, on their profitability due to product heterogeneity. As argued above, relative product homogeneity is one of the conditions that has to be met prior to the application of this solution. Nonetheless, a vigorous application of the maverick model in several representative industries might increase the risk factor to affect such industries as well.

4.3 Post-maverick Period Allocative Efficiency

Assuming no change in market structure has occurred, profits may theoretically return to their pre-maverick levels once the government ceases to set the maverick’s prices. However, the threat of repeated intervention might induce the

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46 Assuming the firm has or will have sufficient capacity to take away some of the market shares of its rival oligopolists if it prices its widgets at a lower price than its rivals.
oligopolists to price at lower levels. The formal analysis is similar to that of the previous section. Better, the credibility of the threat of repeated intervention is much higher than in other industries, given the government’s familiarity with the specific industry’s conditions and cost structure. Also, the existence of a benchmark price, created by the maverick period, may create significant consumer pressure on the government to resume support of the maverick firm if prices are significantly elevated.

Moreover, capacity that was added in the maverick period in order to meet increased market demand might stimulate subsequent, unsubsidized competition and cost reductions.

4.4 Effects on Productive Inefficiency

The maverick model could also reduce the problem of productive inefficiency created by sub-optimal plant sizes or inefficient firms. Oligopoly pricing creates a price umbrella that may permit the perpetuation of high-cost inefficient producers who do not face competitive pressures to reduce their costs. For example, oligopolists may not expand to achieve minimum efficient scale, even if demand is sufficient to support optimal sized firms, due to their interdependence. Consider a situation where production on efficient scale requires three production plants, each catering to 33% of the market, and the market currently consists of four equal production plants. If the four plants are controlled by four oligopolists, no oligopolist would agree to close down its plant unless it can be satisfied that it will share the profits of the operational plants. Such an agreement would be hard to enforce unless it is deemed legal by the competition laws. The oligopolists will thus probably all operate at sub-optimal production levels. In other situations, oligopoly pricing may permit the existence of inefficient fringe firms.

The maverick model might be used to induce firms to achieve efficient scales or to exit the market if they are highly inefficient. If the maverick’s price is set at a level that could only be profitable if a firm operates at efficient scales, then its rivals will need to expand their operations in order to survive. Consider the following example: four firms A, B, C, and D operate in the market. Firms A, B, and C each cater to 31% of the market and firm D, a fringe firm, supplies 6% of the market and is less efficient than its rivals. The government contracts with firm A and sets the price at $10, which could only be achieved by firms that achieve minimum efficient scales of production at 33% of

47 HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE (2d ed. 1999). This can be improved by “transferable production quotas” whereas a firm with lower costs can purchase the right to produce more from a firm with higher costs. This, however, is highly detectable as it involves money transfers from one firm to another. The cartel member should also have great confidence in the durability and profitability of the cartel.
the pre-maverick industry demand. Firms B and C will need to expand in order to survive. Firm D would most likely need to exit the market. Such a change would enable the realization of scale economies and lower production inefficiency for firms A, B and C. It is not necessarily the case that firms with higher costs in the pre-maverick period will have to exit the market. If higher production costs result from the firms' inability to reach minimum efficient scales of production, the increased industry output that results from lower prices might enable them to operate efficiently during the maverick and the post-maverick periods.

Whether a change in market structure is economically warranted depends on a comparison of the industry's performance under the new structure, after government subsidization, to the existing structure. As argued above, a pricing scheme might be used to allow the market to break out of an inefficient structure. The attractiveness of such a change depends on the economic benchmark chosen – either consumer or total welfare. If total welfare is the benchmark, then a more concentrated market structure characterized by production efficiencies may be justified. If consumer welfare is the benchmark, much depends on whether or not the cost savings enjoyed by the oligopolists would be passed on to consumers. It also depends on the effect of the change in market structure on the ability of firms to collude and on the regulatory methods at the disposal of the competition authority to regulate more concentrated market structures.\footnote{Such an analysis is very similar to the one employed in merger decisions. See \textsc{Horizontal Merger Guidelines} (Dep't of Justice and Federal Trade Commission, revised 1997), \textit{reprinted in} \textsc{Trade Reg. Rep.} \textsc{13}, 104.}

In any case, the government can prevent the creation of more concentrated structures by setting the maverick's price above the costs of all (or at least most) of the firms operating in the industry, but still below the oligopolistic price.

The maverick model might also increase productive efficiency in other oligopoly industries in which the government does not intervene directly. The formal analysis is similar to that of Section 4.2 above.

\subsection*{4.5 Reduction of Cartelistic Activity}

Another important indirect benefit of the maverick model involves its negative effects on the incentives and the ability of oligopolists to engage in cartelistic activity. The potential for applying the maverick model in the market may destabilize incentives for oligopolists to collude.\footnote{Collusion is thus reduced without direct enforcement. As the detection and proof of illegal collusion is sometimes exceedingly difficult, this may create a significant positive externality. See \textsc{Oligopoly}, \textit{supra} note 1 (discussing the difficulty of detecting and proving the existence of an illegal cartel).} Even if market conditions are conducive to collusive conduct (small number of competitors, entry barriers), a successful collusive scheme
must still overcome three main hurdles: reaching a joint-maximizing agreement, detecting deviations from the agreed-upon trade terms, and enforcement of the agreement by way of punishing such deviations. The maverick model creates obstacles to achieving all three tasks.

Reaching an agreement requires the establishment of a mutual understanding or consensus regarding trade terms. The maverick model introduces another factor that needs to be evaluated in setting the collusive price: the risk of government intervention if price is set too high. As different firms may have different estimations of such a risk, it might create hurdles to reaching an agreement.

The maverick model could also reduce the incentives of oligopolists to adopt certain coordination-facilitating or policing devices. For example, meeting competition clauses, in which firms undertake an obligation to match lower prices charged by any rival for similar articles, are often used to police collusive agreements as they automatically incorporate the aggressive responses to price cutting that are needed to support collusion. Customers are used to police the arrangement, since the chance to collect damages or to receive price discounts creates incentives for them to ensure performance and bear the costs of monitoring the oligopolist’s conduct and enforcing the contract. The possibility that the maverick model may be applied will reduce the incentives of oligopolists to adopt such clauses as they will be required to match the lower price immediately, even if the maverick could not have expanded fast enough to take away their market shares by lowering prices alone. The welfare effects of eliminating the use of such clauses depends on two competing considerations. On the one hand, these clauses may not be in the buyers’ interest if the collective acceptance by all buyers stabilizes the sellers’ joint profit outcome and makes discounting less desirable or price increases less risky. Nonetheless, such clauses may be valued by each buyer individually, especially small buyers, since they ensure that they will enjoy the lowest price offered for a product or a service by any firm operating in the market.

50 Jacquemin & Slade, supra note 4.
4.6 Effects on Dynamic Efficiency

Any intervention in the workings of the market should also be evaluated by its effects on dynamic efficiency: the incentives of firms to invest and engage in the research and development of new and improved products or processes. The maverick model does not significantly affect dynamic efficiency, as profit levels are reduced significantly in a limited number of industries and only for a limited time.

The maverick model might, instead, increase the incentives of firms to innovate, as monopoly profits are now proportionally higher than oligopoly profits. Also, if the government indicates a preference to choose as its maverick the most efficient competitor, oligopolists would have incentives to become more efficient in order to assume this role. Lastly, an oligopolist that is much less efficient than its rivals stands to lose significantly in a maverick period. Anticipating this, firms would have stronger incentives to increase dynamic efficiency.

V. The Details of the Maverick Model

5.1 Optimal Price Levels Set by the Maverick

Two general parameters should guide the government in its pricing decision. First, the price set by the maverick should reduce the market price to the lowest level that would still allow efficient firms to compete with the maverick without incurring any losses (although losing all or most of their supra-competitive profits from oligopolistic coordination). The second parameter, a derivative of the first, is that the resulting market structure (if price is set at levels that allows only efficient firms to operate profitably and compels less efficient firms to exit the market) should be one that would not reduce total welfare (or consumer welfare, should that be chosen as the benchmark), once the government stops subsidizing the maverick. In most cases, this will dictate that the maverick’s prices be set at its marginal cost (P=MC). Assuming the three main conditions stated above apply (no significant barriers to the maverick’s expansion, no significant product differentiation, continuous game), the maverick’s rivals will follow its pricing scheme and price at similar levels.

However, adherence to the above principles may require that under certain market conditions the price set by the maverick firm will not equal its marginal cost. For example, if the maverick has much higher costs than its major rivals (due, for example, to unrealized scale economies and the fact that more efficient rivals did not agree to assume the maverick role), it might be more efficient to price the product below the costs of the maverick firm and at the marginal costs of firms which have achieved
scale economies (P=MC of scale oligopolists).\textsuperscript{52} Interestingly, efficient firms will have stronger incentives to cooperate with the government if the government states \textit{ex ante} its intention to base the prices charged by the maverick firm on the more efficient rivals' marginal costs. An important effect of any pricing scheme that sets prices below the marginal costs of some firms operating in the industry is the possible exit of less efficient firms if expansion to cater to new levels of demand will not reduce their costs significantly, and the creation of a more concentrated market structure. The welfare effects of such a change were analyzed in Section 4.4 above. It is important to note that the model may achieve efficient results even if prices are set above the optimal level, as long as they are set sufficiently below the pre-maverick price level.

Whatever the optimal price, the maverick must be given sufficient flexibility to adjust its price to cost reductions or increases (for example, a change in the price of an important input). This is especially important where cost variations are industry-wide and affect all of the maverick’s competitors. Section 5.3 below analyzes the factors that affect the government’s ability to verify the real cost structure of the maverick and its rivals.

5.2 The Temporal Element: Length of Subsidy

How long should the government subsidize the maverick? The optimal length of time varies from one industry to another depending on the specific industry’s conditions. In general, it should be the minimum period that is sufficient to create significant losses to the maverick’s rivals if they do not reduce their prices and to create incentives for market participants to assume the role of the maverick firm. In particular, time frame considerations must include the length of time it will take the maverick to expand its output and significantly erode the market shares of its rivals including the time it may take to educate consumers about the maverick firm’s low-cost product where products are not completely homogeneous. However, the government does not have to specify the length of its subsidy before it enters the market and even if it does, this information should not necessarily be conveyed to all market participants. Arrangements should be put in place for the subsidy to be withdrawn once a technological change or another change in market conditions breaks down the oligopolistic market structure that created the need for a maverick firm in the first place.

5.3 Verifying True Costs

In practice, the efficient application of the proposed model depends largely on the government’s ability to verify the costs of oligopolists operating in the market.

\textsuperscript{52} It is generally more efficient to choose the most efficient firm as a maverick, unless the government is limited in its choice. See discussion in Section 5.5 below.
However, given informational asymmetries between the oligopolists and the government, this may prove difficult.

Interestingly, the proposal creates mixed incentives for firms to convey their true cost structures to the government. On the one hand, several factors combine to induce the maverick firm to state a lower cost structure than it has in practice once it decides to assume this role. These incentives are created by the fact that the chosen maverick might contemplate using the maverick role to engage in government-subsidized predation, as discussed below, in order to drive its competitors out of the market. In addition, if the government’s choice of maverick is based on efficiency considerations, the firm has strong incentives to state low costs in order to induce the government to prefer it to its rivals. On the other hand, the lower the costs that oligopolists state, the stronger the risk of government intervention and the higher the risk that the government will set a low price for a maverick that will be difficult for other firms to match. Moreover, it would be more difficult to justify a return to original prices once the subsidy ceases.

The government should employ these contradictory incentives by inquiring about the cost structure of all firms (or at least the major firms) operating in the industry before it announces which firm will play the role of the maverick, even before it announces whether it will intervene in the specific industry, and by holding firms to their cost information statements once a maverick is chosen. In any case, cost inquiries are a common procedure engaged in by antitrust enforcers. For example, in merger decisions that involve efficiencies, and in predation cases, the authorities must verify the cost structure of some market participants.

The information asymmetries that exist between the maverick and the government raise the danger of government-subsidized predatory pricing by the maverick. Predatory pricing occurs when a firm prices its products below cost with the intention of driving its competitors out of the market and reaping high profits once they exit (or fail to enter). The risk of predation is increased by the proposed model since the maverick will not incur any losses even if it prices its widgets below average variable cost if the government-subsidy is sufficiently high. Even its more efficient rivals would not be able to compete with it effectively and would be driven out of the market. This is especially troubling in industries with high entry barriers.

53 It is unnecessary, for the purposes of this article, to discuss the correct test for predatory pricing. For some of the proposed tests see, Phillip Areeda & Donald F. Turner, Predatory Pricing and Related Practices Under Section 2 of the Sherman Act, 88 HARV. L. REV. 697 (1975); F.M. Scherer, Predatory Pricing and the Sherman Act: A Comment 89 HARV. L. REV. 869 (1976). For the purposes of this article it is assumed that the maverick has chosen to price his products below this cost measure.
The government must devise appropriate safeguards that will eliminate or at least significantly reduce the occurrence of predation. First, the maverick should be required to clearly post and advertise the prices of its product. Second, the government should invest resources in monitoring the prices and the quality of the maverick's products and services. This would not only reduce the maverick's incentives to engage in predation, but would also limit collusion among the maverick and other oligopolists by way of varying quality. Third, predation should be dealt with harshly once it is detected, thereby reducing the incentives of the maverick to engage in such conduct. This could be achieved in several ways. The predator might be sued for a violation of the Sherman Act once predation is detected. Alternatively or cumulatively, the government might include a contractual provision that reduces or cancels the subsidy, mandates its restitution, or even includes a penalty once it is found that the maverick has priced its products below levels agreed upon with the government. The efficiency of these methods in preventing predation depends on the ability of the government to detect price deviations. This task may not be a challenging one as the maverick's rivals would have strong incentives to police its prices and quality to ensure the losses they suffer are not larger than those intended by the government. Nonetheless, where policing prices is exceedingly difficult, the costs of applying the maverick model might exceed its benefits. Where policing is difficult, however, it is also difficult for industry participants to coordinate their prices (by way of cartelistic coordination or parallel pricing). Thus, most likely, the oligopolistic price will not create significant welfare losses. In any case, predatory pricing is not a necessary or a primary feature of the proposed model.

5.4 Compensation of the Maverick

The compensation the government should offer the maverick depends on the maverick's incentives to cooperate with it. The stronger the incentives to cooperate, the lower the compensation that must be offered in order to secure such cooperation. In turn, the incentives to cooperate depend on the market conditions in the pre-maverick and post-maverick periods, as well as on the position of the maverick in the market. The higher the entry barriers, the weaker the incentives of established firms to cooperate with the government. Where entry barriers are significant and expansion is costly, firms will take into consideration the difficulties of any maverick in eroding their market shares and established market positions. Nonetheless, if the government creates a credible threat to expand capacity, incumbent firms will take into consideration the

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54 The monitoring of the quality of the product produced by the maverick by the government should be a relatively simple task, as by assumption the products produced by oligopolists in qualifying industries are relatively homogenous and quality differences are easy to detect. Otherwise, the coordinated price scheme would not have worked in the first place.
fact that once their rival does expand, it will eliminate part of their profits permanently. In addition, fringe firms may have strong incentives to use the maverick role in order to expand in the market and strengthen their position. For example, assume a pre-maverick situation with firms A, B, C, and D. Further assume scale economies over 25% of the market. A, B and C all have a production capability of 30%. If D, a fringe firm, can expand its facilities by using a government subsidy and sunk costs are high, then A, B, and C would have strong incentives to cooperate with the government in order to deter D's expansion.

The government does not, however, have to compensate the maverick firm for all of its lost profit. As noted above, given the threat that the government will intervene in the market by creating its own firm or subsidizing the entry of a new competitor, compensation might only enable the maverick to recoup some, but not all, of the lost profits it would have earned otherwise. Also, the higher the post-intervention benefit to the maverick, the lower the necessary compensation. Compensation based on the number of units sold at the lower price would create the strongest incentives for the maverick to compete vigorously and take away some of the market shares of rivals that do not follow its pricing strategy.

The maverick should also be compensated for the expansion of its facilities, should it need to expand in order to create a credible threat. Compensation should not, however, necessarily equal the costs of expansion. Two factors may reduce the level of the compensation paid to the maverick. First, if the added capacity allows the maverick to achieve scale or learning economies, then the per-unit compensation should be lowered by the amount of cost savings the maverick enjoys. Second, if the expansion would enable the maverick to compete more vigorously in the market in the post-maverick period and increase its profits, these long-term profits should be taken into account when calculating the compensation. As noted before, the option of a government-subsidized expansion will create strong incentives for fringe firms to act as mavericks and, accordingly, strengthen the incentives of larger competitors to assume such a role in order to prevent such expansions. It may also strengthen the incentives to reduce the coordinated price in order to reduce the risk of government intervention.

### 5.5 Procedural and Discretionary Powers

It is suggested that application of the maverick model should be based on administrative discretion without a finding of a violation. Condemning oligopoly pricing as such may be unfair since the firms are acting rationally in light of the structure of the market. Each firm is simply considering its own profit-maximizing rate of output, given the output of its rivals and their anticipated responses to its own price
and output decisions. To ignore these issues would require firms to act irrationally. Also, firms engaged in oligopoly pricing act in the same manner as firms in a competitive market, since oligopoly pricing is not based upon a formal commitment but rather on a rational economic choice each firm makes on its own.

The antitrust authorities possess several features that make them the best candidates for applying the maverick model. Although the authorities commonly regulate industries by placing negative constraints on conduct, the tools they use in order to perform their traditional tasks do not have to be stretched too far to perform the unique tasks required by the maverick model. Their expertise in monitoring cost-price differences and analyzing the effects of changes in market structure could be used to determine the cost-price differences in a specific industry, the optimal price for the maverick, and to choose the maverick firm and monitor its prices. In order to apply the model effectively, the antitrust authorities should be given wide discretionary powers as to when to apply the model, as well as to determine the duration of the subsidy and its level.

VI. Limitations of the Model

The analysis in the previous chapters raised and attempted to provide solutions to some of the major criticisms that can be raised against the maverick model. The effects of a change in market structure and government-subsidized predation were discussed in Sections 4.4 and 5.3, respectively. The analysis below raises and analyzes several additional possible objections to the model.

6.1 Governmental Intervention

The most significant objection against the maverick model involves the high level of direct governmental intervention in the market. The government is required to take an active role in changing the natural market conditions that exist in an oligopolistic industry and as a result, all the oligopolists already operating in the market, except for the maverick, will lose most of their profits.

While this objection is a serious one, several factors greatly mitigate its significance. First and most importantly, the model imitates market conditions that might accrue in any oligopolistic market. Lowering tariff barriers that have sheltered a domestic oligopoly from competition with more efficient foreign firms may create relatively similar market conditions. Second, governmental intervention is limited to...

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55 Turner, supra note 14.

56 Calculating the price increment resulting from the exercise of market power is a routine procedure in merger, predation, or price fixing cases. It is also commonplace in private damage claims based upon monopolization or collusion allegations.
directly setting the prices of one firm in the industry. By leaving the pricing, output and quality decisions of all other firms to their own decision-making process, intervention is significantly limited. No firm is forced to act in a manner that is against its interests and there is no ongoing control except for the prices of the maverick. As noted above, the model creates incentives for the maverick to expand its output and ensure the quality of its widgets if compensation is based on a per unit basis. Third, no other method that involves less intervention has been proposed for dealing with oligopoly pricing. This proposal intervenes in the firms' decision making process to a much lesser extent than direct regulation of price and other strategic decisions by equating market conditions with those that would prevail in a more competitive market setting.57

In addition, several methods can be employed in order to reduce the risk that government intervention may increase costs instead of benefits. First, a judicial body that will assess the reasonability of the competition agency's actions can supervise the procedure. Preferably, the judicial body will be comprised, in part, of economists.58 The competition authority would have to justify the reasonableness of its decision to intervene in a specific industry, its choice of maverick and the height and length of the subsidy before it can implement the model. Such a review might also reduce rent-seeking behavior by firms in non-oligopolistic markets that will try to portray their industries as oligopolies in order to collect subsidies. It is suggested that private parties have no automatic standing in such procedures, unless they point to a crucial fault in the government's actions. Second, the choice of the maverick should be based on clear and verifiable parameters. In most cases, it would be preferable to choose the most efficient firm to act as the maverick, in order to limit the subsidization of less efficient firms. However, subsidizing a less efficient competitor might have positive long-term effects if cost inefficiencies are based on its inability to reach minimum efficient scales, and the maverick role allows the firm to expand and reach an efficient level. Should there exist two firms with equal chances of becoming a maverick, the maverick should be chosen by an auction, where the firm that bids the lowest subsidy wins.

Finally, given the positive steps necessary to intervene in the market, it is suggested that the model not be applied unless there are clear benefits to its implementation and no other conventional regulatory tool can achieve efficient results.

57 The maverick solution is superior to direct price regulation. The reason is twofold. First, the government has to monitor only the price of the maverick firm rather than the prices set by all market participants. Second, the maverick model offers the maverick a "carrot" and does not directly intervene in the decision parameters of all other firms, while direct price regulation uses a "stick" to regulate the prices and quality of all products sold in the market.

58 Special administrative courts that deal with antitrust issues and are comprised, inter alia, of economists are commonplace in many jurisdictions, including Australia, New Zealand and Israel.
As suggested above, the model has the greatest potential to create efficient results in an industry in which three to six firms produce a homogeneous product. The downside of limiting intervention to such industries is that it will also limit the indirect pressure on other industries to reduce their prices, as the fear of intervention is positively correlated to price reductions in other oligopolistic markets. This can be partly mitigated by random, albeit rare, interventions in some industries that do not exactly fit these characteristics.

Another objection might center on the fact that the oligopolists are simply taking advantage of the existing market conditions and that governmental intervention should not change these natural conditions. Much depends on the view one takes of the profits reaped by the oligopolistic firms in the pre-maverick stage. Once we view these profits as exploitation of the natural conditions of the market, then the maverick model simply reduces profit levels to what could be obtained in a more competitive setting.

To reduce political pressures to limit intervention, the government may educate the public in the benefits of such a model by applying it to selected industries where cost-price differences are significant and which affect the vast majority of the population.

An interesting variation on the maverick model, which reduces government intervention, involves the grant of a waiver by the government to consumer groups who could band together to jointly fund a maverick, instead of the government enlisting a competitor to help it combat oligopolistic pricing. However, this variation raises some important difficulties. First and foremost, collective action problems might prevent its practical application, as some consumers might wish to free ride on the efforts (and the funding) of other consumers to fund a maverick, due to positive externalities. Moreover, if consumers are also competitors, funding by some might create a comparative advantage to others that do not contribute to the funding. To prevent such problems, all or almost all of the consumers must belong to the consumer group. But this implies oligoposony. Also, since not all the effects of subsidizing a firm to reduce its prices would be internalized by the consumer group (as they are, presumably, interested in reducing price levels in a specific market rather than in all markets with similar market structures), they would have reduced incentives to do so. Finally, the disincentive effect on other industries would be much lower than under the maverick model, as there are much higher obstacles to funding a maverick, such as getting governmental approval to act as an oligoposony, and collective action problems.

6.2 Perceived Governmental Favoritism

59 I thank Prof. Victor Goldberg for raising this suggestion.
The model might raise concerns of the fairness of treating firms differently. Regulators might respond to such concerns in two ways. First, the subsidy should be viewed as a tool which is necessary in order to increase consumer welfare and to correct an existing market imperfection. The very similarity of the firms increases the effectiveness of the maverick model. Second, judicial review of the reasonableness of the competition agency’s choice of industry and its choice of a maverick, as suggested above, may also reduce the risk of rent seeking and increase the legitimacy of government intervention. Enabling each incumbent oligopolist to bid for the chance to become the maverick and turning the government’s choice of regulation into a tournament, is also a major tool in reducing favoritism concerns.

Government favoritism arguments might also arise if the model were to be applied only in select industries. Fairness does not require, however, that government act in the same manner in all industries. It can randomly select those industries in which it chooses to operate and pose an unconsummated threat to others.

6.3 Distortion of Competition

Until the maverick expands its output or its rivals match its prices some consumers will pay more than others for similar widgets. This problem is especially severe for consumers that are locked into long-term contracts. If consumers are competitors, this may distort competition in that industry, as competitors might be required to pay different prices for similar inputs. Moreover, consumers of oligopolistic firms might be reluctant to enter into long-term contracts, which are otherwise beneficial. This problem can be mitigated in several ways. First, consumers would, most likely, require contractual clauses that mandate the oligopolist to reduce its prices, once its rivals do so. Entry of a maverick is just one of a vast number of conditions that may affect the market price. Second, the government might need to exercise caution when choosing the industry in which to intervene, by avoiding intervention in industries in which long-term contracting without meeting competition clauses is prevalent.

6.4 Funding

Application of the maverick model may require significant funding. Mainly, funding involves subsidizing the maverick for some portion of the difference between its current price and the price it could have charged under the oligopolistic market structure, and the costs of monitoring the maverick’s prices.\textsuperscript{60} However, reductions in

\textsuperscript{60} Ms. Margaret Bloom, Director of the UK Office of Fair Trade, has identified the funding problem as the model’s strongest drawback. While this is true in the short-run, budgetary constraints can be overcome by providing the competition authorities with additional funding for maverick programs.
allocative efficiency would, in most cases, more than cover these costs. Although consumer welfare is enhanced by lower prices, it is not necessarily the subsidizing consumers who benefit from the maverick. However, consumer benefits accrue not only to those consumers who buy the widgets produced by the specific industry, but due to externalities created by a credible threat, the intervention may well reduce prices in many other oligopolistic markets where firms will reduce prices in order to avoid governmental intervention.

VII. Conclusion

Oligopolistic markets often create significant welfare losses due to the interdependence among oligopolists. This article proposes a novel method to combat oligopoly pricing by creating rivalry among the oligopolists which eliminates most of the problems of other proposed solutions. The maverick model possesses great potential to significantly increase allocative and even productive efficiency in oligopolistic markets by harnassing and fostering the welfare-enhancing effects of competition. By creating incentives for one competitor to set its prices at or near competitive levels, its competitors would have to follow suit or lose their market share. Nonetheless, given the positive steps necessary to intervene in the market, it should not be applied unless there are clear benefits to its implementation and no other conventional regulatory tool can achieve efficient results. In some oligopolistic markets, the maverick model might be feasible and cost-effective. Less interventionary variations on the maverick model, such as subsidizing the cost of any component in the production of the oligopolistic good, may also increase total or consumer welfare, if applied in appropriate circumstances.