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# THE ANTICOMPETITIVE EFFECT OF PASSIVE INVESTMENT

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## Abstract

*The leading antitrust cases provide a de facto exemption for a firm passively investing in its competitor's stock. In contrast, the article presents an economic analysis which shows that even totally passive investments by a firm in its competitor's stock may substantially lessen competition. Accordingly, the article proposes a reconsideration of the current antitrust treatment of such passive investments.*

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# The Anticompetitive Effect of Passive Investment*

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## Introduction

There are many cases in which a firm passively invests in its competitor. For example, Gillette, the international and U.S. leader in the wet shaving razor blade market, acquired, as a passive investment, 22.9% of the nonvoting stock and approximately 13.6% of the debt of Wilkinson Sword, one of its largest competitors.[1] There are also several cases in which one firm's controlling shareholder invests in this firm's competitor. A striking example existed, for several years, in the car rental industry: National Car Rental's controller, GM, passively invested in a 25% stake of Avis, National's competitor. In the very same

[1] United States v. Gillette Co., 55 FR 28312 (1990). See also *infra* note 59, and accompanying text.

industry, it was reported that Hertz's controller, Ford, had acquired $324 million worth of Budget's nonvoting stock.[2]

Surely, if Gillette were to merge with Wilkinson Sword, National Rent a Car were to merge with Avis, or Hertz were to merge with Budget, antitrust courts and agencies would acknowledge that such mergers may substantially lessen competition. But how should we treat the seemingly different situation where Gillette is merely a passive investor in Wilkinson Sword, where National's controller (GM) merely purchases Avis stock as a passive investor, or where Hertz's controller (Ford) passively invests in Budget? In the leading cases, as the article shows, antitrust courts and agencies grant such passive investment a de facto exemption from antitrust liability. This stems from their interpretation of an exemption for stock acquisitions "solely for the purpose of investment" included in Section 7 of the Clayton Act,[3] the antitrust merger provision.

This article claims that this legal outcome is unwarranted. The article demonstrates how even such passive investment by a firm in its competitor (or by a firm's

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2 See Purohit et al., *Rentals, Sales and buybacks: Managing Secondary Distribution Channels* 31 J. MARKETING RES. 325 (1994); Karen Talley, *Avis Advertisements Fuel Questions* 49 BUSINESS NEWS 1 (1990). See also *infra* note 50, and accompanying text.

3 38 Stat. 730 (1914), (codified as amended, 15 U.S.C.A. §§12-27 (1987)).

controller in this firm's competitor, as in the car rental example), in an industry where only few firms operate, may substantially lessen competition. The main reason, in a nutshell, is that such passive investment commits the investor to compete less aggressively with the firm in which the investment was made. The investor is deterred from competing aggressively, because such aggressive competition would lower the value of the investor's investment.

Part I analyzes the leading cases' interpretation of the exemption for acquisitions "solely for investment" included in Clayton Act Section 7. This interpretation is the driving force behind the leading cases' treatment of passive investments in competitors.

Parts II through V demonstrate the anticompetitive effects of passive investments which motivate the policy concerns presented by the article. Part II, through the analysis of a simple numerical example, portrays the basic intuition behind the anticompetitive effect of passive investments. Part III shows how passive investment in a competitor, when there are only few firms in the market, will reduce quantities and raise prices. Part IV shows how passive investment facilitates tacit collusion (i.e., a situation where firms sustain a supra competitive price because each firm fears that its price cut will trigger a price war). In particular, a firm that is inherently a more aggressive competitor can invest in a competing firm to facilitate tacit collusion with its less aggressive competitors. It also shows how investment in a competitor may help firms with different costs coordinate a collusive price, thereby removing obstacles to tacit collusion in the case where firms' costs differ. Finally, Part V shows that investment by a firm's controller (e.g., its parent corporation) in this firm's competitor, as in the above-mentioned car rental example, raises particular antitrust concern.

Part VI examines the legal implications of the economic analysis pursued in parts II through V. It first demonstrates how the leading cases' treatment of passive investments grants such investments a de facto exemption. It then shows how the exemption of stock acquisitions "solely for investment" can be interpreted so as to factor in the anticompetitive effects of passive investments. Next, it briefly discusses the question of efficiencies that passive investment may involve. While passive investment does not involve efficiencies associated with joint control of facilities, more subtle efficiencies may exist. Finally, it discusses appropriate remedies for cases in which passive investment hinders competition. It is shown that divestiture of the stock is the only effective remedy.

## I. The Legal Treatment of Passive Investment--The "Solely For Investment" Exemption

Acquisition of another firm's stock has traditionally been treated under Clayton Act Section 7[4] , which condemns acquisitions of "the whole or any part of the stock" of another firm where "the effect of such acquisition may be substantially to lessen competition...". The third paragraph of this section, however, includes the following exemption:

> This section shall not apply to persons purchasing such stock solely for investment and not using the same by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition.

This exemption (referred to hereinafter as the "solely for investment" exemption) demands a two pronged test:[5] The first prong consists of determination whether the acquisition of the stock was made "solely for investment".

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4 It is widely acknowledged that Clayton Act Section 7 applies to stock acquisitions even when control is not obtained by the acquiring firm (see Denver and Rio Grande Western Railroad Co. v. United States, 387 U.S. 485, 501 (1967); Unites States v. E.I. Du Pont De Nemours, 353 U.S. 586 (1957)).

5 See Janet H. Winningham, *'Solely for Investment Purposes': Evolution of a Statutory Exemption Under Clayton Section 7* 12 LOY. U. CHI. L.J. 571 (1981); Anaconda Co. v. Crane Co., 411 F.Supp. 1210, 1219 (S.D.N.Y. 1975); United States v. Tracinda Investment Corporation, 477 F.Supp. 1093, 1098 (C.D.Cal. 1979).

If the first prong is satisfied and it was determined that the acquisition was made "solely for investment", the acquisition will not be examined according to the main effects clause of Clayton Act Section 7 (which asks whether the acquisition 'may substantially lessen competition'). Instead, the acquisition will be examined according to the second prong of the "solely for investment" exemption: It is examined whether the acquirer of the stock is "using the [stock] by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition". As the *Anaconda* Court puts it:

> In cases where the "solely for investment" exemption does not apply, a plaintiff need only show a reasonable probability of a lessening of competition...Thus, the anti-competitive effects may be attacked in their incipiency. The statutory exemption, however, conspicuously omits this language. Once it is established to the satisfaction of the Court that the acquisition is "solely for investment", the statute requires a showing that the defendant is "using the (stock) by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition..."...[6]

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6 411 F.Supp. 1210, at 1219, adopted in *Tracinda*, 477 F.Supp. 1093, at 1097, 1101 and note 10; Pennsylvania R. Co. v. Interstate Commerce Commission, 66 F.2d 37, 39-40 (3d

Although the language of the second prong is quite vague, in order to give it any meaning, it is clear that it involves a more lenient test than that of Section 7's main effects clause. Otherwise, the "solely for investment" exemption would be superfluous.[7] The meaning given to this second prong by the case law, which indeed is the most consistent with the second prong's language and context, is that this second prong requires the plaintiff to show evidence of an <u>actual</u> lessening of competition (or an attempt to actually lessen competition). This is in contrast to the general test of Clayton Act Section 7, in which it is enough if the plaintiff shows <u>probable</u> tendencies to lessen competition.[8]

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Cir. 1933), *aff'd mem. by an equally divided court*, 291 U.S. 651 (1934).

[7] As acknowledged in *Tracinda* 477 F.Supp. 1093, note 5.

8 See *Anaconda*, 411 F.Supp. 1210, at 1219; *Pennsylvania R.R*, 66 F.2d 37, at 39-40; *Tracinda*, 477 F.Supp. 1093, at 1101 and note 10 ("In the substantive provisions of the first two paragraphs of Section 7, Congress showed concern for the probable future consequences of the acquisition by utilizing the language '<u>may</u> be substantially to lessen competition.' On the other hand, with the "solely for investment" exemption, Congress exhibited a concern for the past and present effect of the acquisition by utilizing the language 'and not <u>using</u> the same...to bring about...the substantial lessening of competition.'..." (*Tracinda, id.*). In contrast, it is well established that in a case reviewed under the main effects clause of Clayton Act Section 7, the plaintiff need only show probable anticompetitive effects. Furthermore, the section is meant to arrest such anticompetitive effects in their incipiency. See F.T.C. v. Procter & Gamble Co. 386 U.S. 568, 577 (1967) ("[Clayton Act Section 7] can deal only with probabilities, not with certainties. And there is certainly no requirement that the anticompetitive power manifest itself in anticompetitive

Put differently, the main effects clause of Clayton Act Section 7 demands a full blown examination of whether the acquisition may (in the probabilistic sense) substantially lessen competition. In contrast, if the acquisition is "solely for investment", such a full blown examination will not be conducted. Instead, a more limited factual inquiry will be pursued as to whether the acquisition is actually (rather than probabilistically) lessening competition, or whether there is an attempt on the part of the acquirer of the stock to actually (rather than probabilistically) lessen competition in the future.

As to the first prong of the "solely for investment" exemption, requiring a determination whether the acquisition is "solely for investment", the leading cases have created a tautology between an acquisition of stock being "solely for investment" and it being "passive". According to the leading case law, if an acquisition of stock is totally passive (i.e., the acquirer of the stock will not gain influence

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action before Section 7 can be called into play. If the enforcement of Section 7 turned on the existence of actual anticompetitive practices, the congressional policy of thwarting such practices in their incipiency would be frustrated." (*Procter & Gamble, id.*); see also Brown Shoe Co. v. United States, 370 U.S. 294 (1962), 323, 343, 346; Ash Grove Cement Company v. Federal Trade Commission, 577 F.2d 1368, 1378-1379 (9th Cir. 1978); *Du Pont*, 353 U.S. 586, at 589; and PHILLIP AREEDA AND LOUIS KAPLOW, ANTITRUST ANALYSIS 816 (4th ed. 1988).

over the actions of the firm in which the investment was made, or access to this firm's sensitive information) it will be considered as "solely for investment".[9] Accordingly, an acquisition of stock will not be considered "solely for investment" if the acquirer intends, through the acquisition, to obtain active control of the firm in which the investment was made.[10] In addition, this first prong will not be satisfied, even where control is not achieved by the acquisition, if the acquirer of the stock intends to obtain control in the future[11] or at least gain some degree of influence over the actions of the firm in which the investment was made (for example, through the right to elect a member of the board).[12] Similarly, the first prong will not be satisfied when the acquirer of the stock can use its position as stock holder to access sensitive information regarding the activities of the firm in which the investment was made.[13]

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9 *Tracinda*, 477 F.Supp. 1093, at 1098; *Anaconda*, 411 F.Supp. 1210, at 1218-19; United States v. Amax, 402 F.Supp. 956, 974 (D.Conn. 1975); United States v. Gillette Co., 55 FR 28312 (1990).
10 *Tracinda, id.*; *Anaconda, id.*; *Amax, id.*
11 Hamilton Watch Co. v. Benrus Watch Co., 114 F.Supp. 307, 315-316 (D.Conn. 1953), *aff'd*, 206 F.2d 738 (2d Cir. 1953).
12 *Hamilton Watch*, 114 F.Supp. 307, at 317; *Du Pont*, 353 U.S. 586; United States v. Wilson Sporting Goods Co., 288 F.Supp. 543, 556 (N.D. Ill. 1968).
13 F. & M. Schaefer Corp. v. C. Schmidt & Sons, 597 F.2d 814, 818 (2d Cir. 1979).

Therefore, the leading cases, in their application of the "solely for investment" exemption's first prong, focus on the question whether the acquirer of the stock will gain influence over the firm in which the investment was made. Accordingly, a stock acquisition that is totally passive (i.e., does not involve any influence over the activities of the firm in which the investment was made, or access to this firm's sensitive information) will be considered "solely for investment" and satisfy the first prong. A totally passive stock acquisition will therefore be exempted from a full blown examination as to whether it may (in the probabilistic sense) substantially lessen competition. Instead, the passive stock acquisition will be examined under the much more lenient second prong test.[14]

In our view, the leading cases' interpretation of the "solely for investment" exemption is unwarranted. Our critique will be pursued in two stages. First, Parts II through V will show that even totally passive stock acquisitions may possess substantial anticompetitive effects. Second, Part VI.A explains why the leading cases' interpretation amounts to a de facto exemption of passive stock acquisitions. Finally, Part VI.B proposes a refined interpretation of the "solely for investment" exemption.

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14 *Supra* note 8, and accompanying text.

## II. The Anticompetitive Effects of Passive Investment--A Simple Example

In a market where few firms operate (also called an oligopolistic market) when a firm invests in its competitor's stock, the investing firm will tend to compete less aggressively. This is because if the investing firm competes aggressively, thereby causing losses to its competitor, the value of the competitor's stock will fall. This will cause the value of the investing firm's investment to fall as well.

Let us roughly illustrate this effect by using a simple numerical example. Suppose firm 1 and firm 2 compete in an oligopolistic market. Suppose further that an aggressive competitive action on the part of firm 1 (e.g., a price cut by firm 1) will make firm 1 gain $1 (say, due to an increased market share) and make firm 2 loose $4 (say, due to a decreased market share). Since firm 1 does not take firm 2's losses into account, it will elect to pursue the aggressive action (e.g., it will choose to price cut), thereby gaining $1. But suppose now that firm 1 acquires 26% of firm 2's stock. That is, firm 1 becomes a passive investor in firm 2 and shares 26% of firm 2's profit flow. Firm 1 will therefore incur 26% of firm 2's losses. If firm

1 now decides on the price cut, it will earn $1 (on account of its own operations) but loose 26% of $4, which is greater than $1, on account of its 26% stake in firm 2. Firm 1, due to its investment in firm 2, will now refrain from price-cutting, and will choose the less competitive course of action.

A natural question one could now ask is why should firm 1 acquire firm 2's stock in the first place. In the above-mentioned example, firm 1 would be better off if it hadn't acquired firm 2's stock. Had firm 1 not acquired firm 2's stock, it would have price cut and earned $1. The stock acquisition caused it not to price cut and, according to the example, earn nothing. This occurred because the example, for the sake of simplicity, did not capture the whole story. In particular, it did not capture the "commitment value" of passive stock acquisition.

In a more complex and realistic scenario, firm 2, in the above-mentioned example, will anticipate firm 1's aggressive competition. This anticipation may cause firm 2 to compete aggressively in the first place. If firm 2 knows that firm 1 will price cut anyway (or engage in other aggressive behavior), it may well rationally price cut itself (or engage in other aggressive behavior itself), causing losses to firm 1. Suppose firm 2 would indeed price cut (in order to "strike first", knowing that firm 1 will price cut anyway), and that this would cause firm 1 losses of $4. The only way firm 1 can avoid these losses is to some how commit itself to be less aggressive and not price cut. If firm 1 were to make such a commitment, firm 2, in this example, would not fear firm 1's price cut, and would not price cut itself.

Investment by firm 1 in firm 2's stock serves as precisely such a commitment device. If firm 1 acquires 26% of firm 2's stock, its incentives are realigned in a way that would make price cutting by firm 1 unprofitable. Firm 2, knowing this, would be reassured and would refrain from price cutting itself. Thus, by investing in firm 2, firm 1 induces firm 2 to compete less aggressively, and avoids the losses from such aggressive competition.

This very simple example illustrates how stock acquisition reduces competition by making the firms involved behave less competitively. Note that this competition-reducing effect is intact even if the stock acquisition is totally passive (in our example, firm 1 was merely a passive investor in firm 2). This is because the effect stems from a realignment of incentives on the part of the firm acquiring the stock. It does not depend in any way on the ability of the firm acquiring the stock to influence the behavior of the firm in which the investment had been made.[15] Parts III through V will give a more detailed economic analysis of this anticompetitive effect.

## III. The Price Increasing Effect of Passive Investment--The Case Without Tacit Collusion

The competition-reducing effect of passive stock acquisition was shown by the economics literature to hold even if firms are not engaged in ongoing tacit collusion. By "ongoing tacit collusion" we refer to a situation where firms sustain a supra competitive price because each firm fears that its price cut will trigger a price war that will harm all firms, including the price cutting firm, in the long run. Thus, even if such "ongoing tacit collusion" is not occurring, it can be shown that passive stock acquisition makes the market less competitive than it would have been without the stock acquisition: In an oligopolistic

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15 It should be noted that the interest-aligning effect of passive stock acquisition is manifested not only when firms are horizontally related (i.e., compete with each other), as discussed in the text, but also when they are vertically related (e.g., have a buyer-supplier relationship). This is because stock acquisition, even when totally passive, is a means of achieving a certain degree of profit sharing between the firm acquiring the stock and the firm in which the investment is made. In many cases, profit sharing, even without joint control, will suffice to produce vertical anticompetitive foreclosure effects. Compare Oliver Hart and Jean Tirole, *Vertical Integration and Market Foreclosure* 1990 BROOKINGS ARTICLES: MICROECONOMICS 205, 206.

setting, passive stock acquisition will reduce the industry's output and raise prices.[16]

The intuition for this result is similar to the basic intuition illustrated by the numerical example of Part II above. In oligopoly, even when there is no ongoing tacit collusion, firms do realize the impact of their pricing and quantity decisions on their competitors' profits. If one oligopolist (that is, a firm in an oligopolistic market) invests in part of its competitor's stock, the investor competes less aggressively, since it incurs some of the competitor's losses from the investor's aggressive competition.[17] Therefore, once an oligopolist has invested in its competitor's stock, the investor decides, ceteris paribus, on producing a lower quantity and charging a higher price than it would have but for the investment.

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16 See Robert J. Reynolds and Bruce R. Snapp, *The Competitive Effects of Partial Equity Interests and Joint Ventures* 4 INT'L J. INDUST. ORGANIZATION 141 (1986); Timothy F. Bresnahan and Steven C. Salop, *Quantifying the Competitive Effects of Production Joint Ventures* 4 INT'L J. INDUST. ORGANIZATION 155 (1986), who offer a modified HHI index to account for these effects of passive stock acquisition. It should be noted that in markets with homogenous products (e.g., cement) the effect of passive stock acquisition may not affect industry price or quantity if firms are not engaged in tacit collusion. See David Gilo, Partial Ownership as a Strategic Variable to Facilitate Tacit Collusion, sections 2.2.1, 3.1.1. (1995) (unpublished manuscript, on file with the author, Harvard Law School). In such cases, the anticompetitive impact of passive stock acquisition may be explained only through its effects on the facility of tacit collusion (see *infra*, Part IV).
17 As explained *supra* in Part II.

When an oligopolist passively invests in its competitor's stock, industry price will rise (and quantities will fall) even where there exist oligopolists in the industry that did not invest in a competitor. Suppose that in the example of Part II there are not two firms in the industry but three: firm 1, firm 2, and firm 3. If firm 1 invests in firm 2's stock, firm 1, as illustrated in the preceding paragraph, becomes less aggressive and contracts output. It can be shown that this will cause total industry output to fall, and prices to rise, even though firms 2 and 3 did not invest in their competitors' stock.

This result holds in spite of the fact that, in some cases, firms 2 and 3 may respond to firm 1's contraction of output by themselves <u>raising</u> output and becoming more aggressive. Firm 1's contraction of output can be shown to dominate, so that total industry quantity indeed diminishes. Therefore, industry price will still rise.[18]

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[18] In many other cases, firms 2 and 3 themselves tend to contract output and raise prices in response to firm 1's contraction of output. Here, obviously, investment by firm 1 in firm 2's stock will raise industry prices and reduce industry output. The question if, in a particular industry, firms 2 and 3 will respond to firm 1's contraction of output by themselves contracting (or rather expanding) their output is difficult to answer in practice. For a formal presentation of the distinction between the two cases see JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 323-328 (1988).

This phenomenon can be explained by the general fact that, in an oligopolistic setting, firms realize the impact of their behavior on industry price and quantities. When firm 1, in our example, contracts output, firms 2 and 3 may respond by raising their output levels, but only up the level where an additional unit of output brings them revenue equal to the cost of producing this marginal unit. As can be shown, this makes firms 2 and 3 expand output by less than firm 1's initial output reduction.[19]

Furthermore, the anticompetitive effect of passive stock acquisitions can be shown to increase with the levels of such stock acquisitions. In a particular industry, the more abundant is the phenomenon of firms investing in their competitor's stock, and the larger are these investments, the stronger the quantity reducing and price increasing effect.[20]

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19 Reynolds and Snapp, *supra* note 16. To illustrate this phenomenon, suppose there are initially two firms in the market and one of the firms exits the market (i.e., contracts its output to zero). Thus the market is served by a monopoly instead of a duopoly. Although the remaining firm normally expands output after its competitor exits, it is well known that a monopoly output is smaller than a duopoly's aggregate output. The monopolist will maximize its profits by expanding output only until the revenue produced by an additional unit equals the cost of producing this additional unit. Accordingly, the monopoly expands output by less than the preceding output reduction occurring upon the exit of the other firm (see also Reynolds and Snapp, *id.*, note 14; and generally Tirole, *id.* at 220).

20 Reynolds and Snapp, *supra* note 16.

The intuition for this monotonicity flows from the basic effect of passive stock acquisition illustrated in Part II above. The larger the investments of firms in their competitors, the less aggressive the investing firms become and the more they reduce output (and raise prices). Furthermore, the more firms in the market which invest in their competitors' stock, the more instances of such output reduction, and the more is total industry output reduced and industry price raised. Conversely, small investments in a competitor's stock, in an industry in which many firms did not invest in their competitors at all, should cause less antitrust concern.

## IV. Passive Investment as a Facilitator of Tacit Collusion

### *A. Passive investment as an aid in sustaining tacit collusion*

Part III discussed the case in which firms were not tacitly colluding over the industry price. We shall now consider the effects of passive stock acquisition where oligopolists tacitly collude. By "tacit collusion" we refer to a situation in which oligopolists interact on an ongoing basis. Thus, as economic theory shows, supra competitive pricing may be sustained, because each firm understands that its price cut will trigger a price war that will make all firms worse off.[21]

Tacit collusion is not always possible, however. The firm's first obstacle to tacit collusion is coordinating the collusive supra competitive price to be charged. This hurdle is considered especially significant when firms' preferences regarding the collusive price differ. Part B below will show how passive stock acquisition helps overcome such problems of coordinating the collusive price.

Even if oligopolists can potentially succeed in coordinating a collusive price, however, tacit collusion might not be sustainable. In particular, tacit collusion will not be sustainable when one or more firms find price cutting profitable in spite of the price war that would follow. In the current section, it will be demonstrated how passive stock acquisition may facilitate the sustainablity of tacit collusion, by making price cutting less profitable.[22]

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21 See Tirole, *supra* note 18, Chap. 6.
22 This was formally shown to hold across different models and with or without cost asymmetries, in Gilo, *supra* note 16. Earlier contributions in the tacit collusion context are David A. Malueg, *Collusive Behavior and Partial Ownership of Rivals* 10 INT'L J. INDUST. ORGANIZATION 27 (1992); and A.E. Rodriguez, Some Antitrust Concerns of Partial Equity Acquisitions (1991) (unpublished manuscript, FTC Working paper No. 186). These analyses are incomplete, as explained in Gilo, *id*. Malueg , *id*., for example, shows that under certain assumptions as to the type of competition, an

In more detail, the intuition for this result is as follows. When oligopolists are tacitly colluding, each firm faces a trade off between the short term profit that could be made by price cutting on the collusive price (and expanding the price-cutting firm's market share), and the long term loss that the price cutter expects to incur by inducing a price war. When a firm's profit from price cutting is larger than the expected loss from a price war, this firm will price cut, and tacit collusion will not be sustainable. If this firm invests in its competitor's stock, however, its profits from price cutting diminish. This is because if it price cuts, the competitor's profits will fall, and so will the value of the price cutting firm's investment in this competitor.[23]

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increase in the level of passive stock acquisition may hinder, rather than facilitate, tacit collusion. It is shown in Gilo, *id.* Section 4, however, that this result is of little policy importance once it is acknowledged that it is the firms that determine their levels of passive stock acquisition, and that this level is not exogenously given, as Malueg had assumed.

5 PHILLIP AREEDA AND DONALD F. TURNER, ANTITRUST LAW 319-320 (1986); and Reynolds and Snapp, supra note 16, at 149, briefly and informally point out the facilitating effect passive stock acquisition may have on the sustainability of collusion. These authors focus, however, mostly on express (rather than tacit) collusion.

23 The same intuition applies to non-price competition, such as quality or service competition, or competition with regard to the development of new technology. A firm that has invested in its competitor's stock will become less aggressive in all aspects of ongoing competition with this competitor. A firm that has invested in its competitor's stock may also be less inclined to compete with this competitor over geographic markets or demand segments served

Let us illustrate the effect of passive stock acquisition on the sustainability of tacit collusion by slightly modifying the more general numerical example of Part II. Suppose firm 1 and firm 2 are tacitly colluding over a high collusive price. Assume firm 1 would gain $4 by price cutting and its expected future losses due to the price war such a price cut would trigger are $3. Thus, without investing in firm 2's stock, firm 1 will price cut (since $4>$3). Firm 2, knowing that firm 1 will price cut anyway, will, of course, price cut itself, and tacit collusion will not be sustainable.

Suppose now that firm 1 passively acquires 25% of firm 2's stock. Firm 1 will now share firm 2's losses from firm 1's price cut. If, for instance, firm 2 looses a total of $8 from the price cut and the price war that follows it, firm 1 will loose $3+$2=$5 from price cutting (it will loose $3 from the price war following the price cut, on account of its own operations, and 25%x$8=$2 on account of its stake in firm 2.) Thus, after investing in firm 2's stock, firm 1 will not find price cutting profitable (since $4<$5).

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by this competitor (See Areeda and Turner, *supra* note 22 at 320). Moreover, a potential entrant that has invested in an incumbent firm's stock will be less inclined to enter the incumbent firm's market (see Reynolds and Snapp, *supra* note 16, at 150).

Firm 1 will indeed find it profitable to invest in firm 2's stock and thus commit not to price cut if this induces firm 2 not to price cut itself. To see this, suppose firm 2 would gain \$4 by price cutting and would loose \$5 from a price war. Thus, if it were up to firm 2, it would not price cut on a collusive price (since \$5>\$4). Firm 2 would find it more profitable to sustain tacit collusion. But if firm 1 does not invest in firm 2, firm 2 may know that firm 1 will price cut (because firm 1 gains \$4 from price cutting and looses only \$3 from a price war).

Accordingly, firm 2 will not charge a collusive price in the first place, since it knows it will be undercut by firm 1 anyway. This harms firm 1 as well. Were tacit collusion going on, firm 1 would gain from price cutting. However, on account of firm 1's known tendency to price cut, there is no tacit collusion in the first place, and no collusive price to undercut. Firm 1 would rather have ongoing tacit collusion with supra competitive prices than a competitive outcome in which tacit collusion is not sustainable.

Thus, firm 1 would want to commit not to price cut, in order to induce firm 2 not to price cut itself. Firm 1 can make such a commitment by investing in 25% of firm 2's stock. As illustrated above, such an investment will make price cutting unprofitable to firm 1. Firm 2, thereby assured that firm 1 will not price cut, will be induced to tacitly collude itself. Thus, tacit collusion, in this example, is enabled by firm 1's investment in firm 2's stock.

In this example, firm 1 was more inclined to price cut than firm 2: We saw that, without investing in firm 2, firm 1 would find it profitable to price cut, since it gains $4 from price cutting and looses only $3 due to a price war. On the other hand, firm 2, in this example, would gain $4 by price cutting and would loose $5 from a price war. Firm 2 would therefore prefer not to price cut on a collusive price. In this sense firm 1 is a more aggressive competitor than firm 2, or more "trigger happy".

Many markets are characterized by some firms being more "trigger happy" than others. For example, a firm with lower marginal costs will tend, other things being equal, to be more trigger happy than a firm with higher marginal costs.[24] Second, when one of the firms, for some reason,

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24 The reason a low cost firm tends to be more trigger happy is somewhat subtle. In essence, it stems from two factors: First, a low cost firm's profits during a price war are higher than a high cost firm's profits during a price war; and second, a low cost firm's "monopoly price" (i.e., the price that maximizes the low cost firm's profits if this firm were to serve the whole market) is lower than a high cost firm's "monopoly price". A low cost firm may still be less trigger happy than its high cost competitor if this high cost firm has a small enough market share. As will be seen in the following text, a firm with a smaller market

has a smaller market share, it can be shown that this firm is more trigger happy, other things being equal, than firms with larger market shares.[25] This is because the firm with the smaller market share has less to gain from tacit collusion and much more to gain from price cutting. By price cutting, the small firm can potentially earn a high short term profit by expanding its market share considerably. A large firm is less aggressive, since its gains from tacit collusion are high, and the potential increase in its market share from price cutting is less substantial.

As a third example, a firm may do business in more lumpy deals than its competitors or in a way that delays detection of its price cuts. This can occur, for instance, when a certain manufacturer regularly sells to a small group of large wholesalers for prices that can be kept secret from competitors, at least for some time. Such a firm is relatively more prone to price cut.[26] If other firms in the same market have less lumpy deals or price cutting by them

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share is itself, other things being equal, more trigger happy. Therefore, the high cost firm will be more trigger happy if the market share effect dominates the cost difference effect. Finally, if the high cost firm's market share is part of the collusive scheme (say, because market shares are allocated among the tacitly colluding firms), the low cost firm will be more trigger happy regardless of the high cost firm's market share, see Gilo, *supra* note 16, section 3.

25 See Reynolds and Snapp, *supra* note 16, at 149.

26 See Tirole, *supra* note 18, at 248.

is detected more quickly, they are inherently less prone to price cut and are thus less trigger happy.

As illustrated by the above-mentioned example, a firm that is inherently more aggressive (i.e., "trigger happy") can strategically commit to behave less aggressively by investing in its competitor's stock. Such a commitment can thereby enable tacit collusion.[27] Without such investment in a competitor's stock, since this firm's trigger happiness is observed by its less aggressive competitors, they will behave aggressively themselves, knowing that the trigger happy firm will be aggressive anyway.

In this sense, a firm's trigger happiness is a curse for this firm rather than a virtue.[28] The only way for the trigger happy firm to induce its less aggressive competitors to tacitly collude, and thus make all firms better off, is to commit itself to be less aggressive. Investment by the trigger happy firm in a competitor's stock (as firm 1 invested in firm 2 in the above-mentioned example) serves as such a commitment.[29]

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27 Gilo, *supra* note 16, section 3.

28 Recall that firm 1, in our example, does not enjoy its high profitability of price cutting on a collusive price, because there is no tacit collusion to begin with. The reason is that firm 2, knowing that firm 1 would price cut anyway, was aggressive itself, and did not charge the high collusive price.

29 Such a commitment is credible. The firm investing in a competitor's stock cannot circumvent its commitment by

It is important to note that when some firms in the industry are more trigger happy than others, it is not required that each firm in the industry invest in a competitor's stock for tacit collusion to be facilitated. All that is needed to facilitate tacit collusion is unilateral investment by the trigger happy firm (or firms) in the stock of one (or more) of its competitors.[30] Suppose firm 1, in our example, is the only trigger happy firm in the industry, and that there are other oligopolists, identical to firm 2, that are less aggressive (i.e., that gain $4 from price cutting and loose $5 from a price war, and thus would prefer tacit collusion to price cutting). Nevertheless, if firm 1 does not invest in any of its competitors' stock, all these less aggressive firms will not tacitly collude, because they know firm 1 would price cut anyway.

Here too firm 1 can induce all other firms to tacitly collude only if it commits itself to be less aggressive and not to price cut. For such a commitment firm 1 need not invest in all its competitors. It suffices if firm 1 invests

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selling out its holdings in the competitor to a third party, thereby making price cutting profitable. Such an attempt is detectable and will signal the intention to price cut to the competitors, which will retaliate immediately and price cut themselves. This will prevent the short term gain that could be made by price cutting.

[30] Gilo, *supra* note 16, section 3.

in one (or more) of its competitors in a way that makes price cutting by firm 1 unprofitable. In this example, suppose firm 1 invests in 25% of one of its competitor's stock (say, firm 2), and firm 2 looses $8 from firm 1's price cut and the price war that follows it. Firm 1 will loose $3+$2=$5 from price cutting ($3 on account of its own operations and 25%x$8=$2 on account of its stake in firm 2), which makes price cutting by firm 1 unprofitable. This commitment by firm 1 would be enough to induce all firms in the industry to tacitly collude and make tacit collusion sustainable, to the benefit of all firms, including firm 1.

Let us now consider a situation in which no competitor is more inclined to price cut than the other. In our example, suppose firm 1 and firm 2 are the only firms in the industry and they are equally inclined to price cut. In particular, suppose firm 1 makes a short term gain of $4 from price cutting and a long term loss of $3 from the price war that would follow a price cut. Suppose further that firm 2 makes a <u>short term loss</u> (e.g., due to a temporary loss of market share) of $5 from firm 1's price cut. Finally, assume firm 2 possesses identical characteristics (i.e., it gains $4 from a price cut, looses $3 from a price war following a price cut, and firm 1 suffers a short term loss of $5 if firm 2 price cuts).

Thus both firms would price cut on a collusive price (since $4>$3) and tacit collusion is not sustainable in the industry. Here too, passive stock acquisition can be used to enable tacit collusion, but unilateral investment by one firm in the other's stock will not suffice. Suppose only firm 1 invests in 25% of firm 2's stock. Firm 1 would then gain $4 and loose $3+$2=$5 from price cutting ($3 on account of firm 1's own losses from a price war and 25%x$8=2 on account of firm 1's stake in firm 2's total losses stemming from firm 1's price cut). Thus, firm 1 looses more from a price cut than it gains, and would prefer not to price cut.

Still, firm 1 knows that firm 2 will price cut anyway, since firm 2's incentives are left unchanged by firm 1's investment in firm 2. This is true in spite of the fact that 25% of firm 2's profit flow belongs to firm 1 (due to firm 1's investment in firm 2). To see this, note that firm 2 gains 75%x$4 from price cutting and looses 75%x$3 from the price war that would follow a price cut. Thus, although firm 2 keeps only 75% of its profit flow, this affects firm 2's gains and losses from price cutting by equal proportions.[31]

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31 The analysis in the text assumes that firm 2's managers, when running firm 2, disregard the profits that belong to firm 1 as a passive investor (firm 2's managers take account only of 75% of firm 2's total profits). The same result would be obtained if these managers maximize firm 2's *total* profits, including firm 1's share in these profits. Firm 2 would still want to price cut (since 100%x$4>100%x$3). Under the latter assumption, as under the former assumption, investment in firm 2 does not change firm 2's incentives.

Accordingly, firm 2 will still find it profitable to price cut. Since firm 1 knows that firm 2 will price cut anyway, firm 1 will refrain from tacitly colluding, and tacit collusion will not be sustainable in the industry.

The same intuition implies that if only firm 2 invests in firm 1, tacit collusion will remain unsustainable. Since firm 1's incentives would remain unchanged, it would still be inclined to price cut. This would deter firm 2 from charging a collusive price to begin with.

The only way passive stock acquisition can enable tacit collusion in this example is if both firms invest in each other's stock. In our example, if firm 1 invests in 25% of firm 2's stock and firm 2 invests in 25% of firm 1's stock, they will both find price cutting unprofitable. Consequently, neither of them will fear that the other will price cut, and tacit collusion will become sustainable. Through such bilateral passive stock acquisitions, both firms make a strategic commitment to behave less aggressively, thereby enabling tacit collusion.

This result also holds generally. When all firms in the industry are equally aggressive (in our example, equally inclined to price cut) all of them need to invest in a competitor's stock for tacit collusion to be facilitated by passive stock acquisition.[32]

## *B. Passive investment as an aid in coordinating the collusive price-- the cost asymmetry case*

In the previous paragraph, it was examined how passive stock acquisition facilitates the sustainability of tacit collusion by making deviations from a collusive price unprofitable. Thus, it was implicitly assumed that a collusive price was indeed tacitly determined, and the only factor that could potentially cause tacit collusion to break down is a price cut on this collusive price by one (or more) of the firms.

In many cases, however, oligopolists face nontrivial coordination problems regarding the ex ante determination of the collusive price. This is particularly because oligopolists may be inherently different from one another in their cost structures, the quality of their products, the location of their plants, and so on. Each firm may accordingly prefer a different collusive price.[33] If firms cannot coordinate a collusive price, they, of course, cannot

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32 See Gilo, supra note 16, section 2.
33 See F.M. SCHERER AND DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 279-282 (3d ed. 1990).

tacitly collude, and competitive (i.e., noncollusive) pricing will prevail. Coordination upon a collusive price is a preliminary hurdle oligopolists must overcome in order to tacitly collude.

A clear example of a case where firms face a conflict of interest regarding the collusive price is when they have different costs.[34] In this section, it will be demonstrated how passive stock acquisition can be used to help solve this conflict of interest stemming from cost asymmetries. By helping solve this conflict of interests, passive stock acquisition facilitates tacit collusion. This is particularly important because coordination problems regarding the collusive price may be difficult to resolve in other ways (say, through express communication) due to fear of antitrust intervention.

Many industries are characterized by cost asymmetries among firms. Some firms may have a cost advantage over their competitors. As stated, tacit collusion between firms with different marginal costs is difficult, because there is a conflict of interest between a high cost firm and a low cost firm regarding the appropriate collusive price. This conflict of interest stems from the fact that a high cost firm's monopoly price (i.e., the price that maximizes the

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34 *Id.*, at 243-244; Tirole, *supra* note 18, at 242, 250-251.

high cost firm's profits if this firm were to serve the whole market) is higher than a low cost firm's monopoly price.

If both a high cost and a low cost firm are to operate in the market and tacitly collude over a single supra competitive price, such firms will have conflicting preferences as to what this collusive price should be. A high cost firm will prefer its higher monopoly price to be the industry's collusive price, while a low cost firm would prefer its lower monopoly price to be the industry's collusive price.[35]

Accordingly, there is no obvious price that firms can tacitly collude upon when their costs differ. Express communication between the firms regarding the collusive price is risky, due to fear of antitrust intervention.[36]

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35 Tirole, *id*. at 66-67.

36 For example, in a duopoly situation, one firm may consent to a collusive price which is closer to the other firm's monopoly price and receive a side payment from the other firm as compensation. Alternatively, the firms may determine a collusive price somewhere between the two firm's disparate monopoly prices while allocating market shares between them so as to split the collusive profits in an equitable way (a formal description of such mechanisms can be found in Richard Schmalensee, *Competitive Advantage and Collusive Optima* 5 INT'L J. INDUST. ORGANIZATION 351 (1987); Robert L. Bishop, *Duopoly: Collusion or Warfare?* 50 AM. ECON. REV. 933 (1960)). These arrangements, however, are unlikely to be used in practice. If they are explicitly reached, they constitute illegal conspiracies that can easily be detected by antitrust agencies. On the other hand, it would be very hard to reach these particular arrangements tacitly. This is

Thus, the firms must resolve their conflict of interest in other ways in order to successfully tacitly collude.

Passive stock acquisition among oligopolists with different costs may be used to help resolve the conflict of interest stemming from cost asymmetries. First, passive stock acquisition can be shown to aid in determining a collusive price that lies between a low cost firm's and a high cost firm's preferred collusive prices. This can be explained through the following example.

Imagine a market with a low cost firm and a high cost firm. The two firms have a conflict of interest regarding the collusive price: The low cost firm prefers a lower collusive price (say, a price of 8) and the high cost firm prefers a higher collusive price (e.g., a price of 10). Suppose the low cost firm invests in the high cost firm's stock. Thus, the low cost firm shares a fraction of the profits generated by the high cost firm's plant. This makes the low cost firm partly identify with the high cost firm's preference regarding the collusive price. It can be shown that the low cost firm would now unilaterally prefer a

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because collusive profits could be split in an infinite number of ways. Moreover, the collusive price may be set anywhere between the low cost firm's and the high cost firm's monopoly prices. The appropriate arrangement would require complex bargaining and is therefore very difficult to coordinate tacitly.

collusive price that compromises between the two firms' disparate preferred prices (i.e., it would prefer some price between 8 and 10).

The higher the level of the low cost firm's investment in the high cost firm's stock, the closer this price will be to 10--the high cost firm's preferred price. Similarly, if it is the high cost firm investing in the low cost firm's stock, the high cost firm would then unilaterally prefer a price below 10--its previously preferred price, and closer to 8--the low cost firm's preferred price.

Accordingly, passive stock acquisition can be used to coordinate a collusive price that compromises between the firms' disparate preferred collusive prices. The firms could now relatively easily implement tacit collusion by allowing the firm that has invested in the other firm's stock to be the "price leader" and set the collusive price unilaterally. Other firms need only follow this price.

To illustrate, suppose the low cost firm, in the above-mentioned example, invests in 20% of the high cost firm's stock, and thus unilaterally prefers the collusive price to be 9. The low cost firm can now tacitly be understood to be the "price leader" and it will unilaterally set a price of

9. The high cost firm will then follow, and set a price of 9 itself.[37] Thus, a collusive price is determined by passive stock acquisition itself, with no need for further coordination.[38]

This use of passive stock acquisition to coordinate a collusive price is thus a particular instance of price leadership.[39] Here, the firm investing in its competitor's stock is the leader, unilaterally setting the collusive price, while the other firm (or firms) follow. The difference from price leadership without passive stock acquisition is that the firms can use passive stock

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[37] Such conduct, in itself, would be difficult to prosecute as price fixing. The low cost firm, in this example, sets the price unilaterally, and the high cost firm follows, with no communication between the firms.

[38] Additionally, the firms need not coordinate market shares, rather they take as given the market shares that naturally result in the particular market when the competitors charge the same price.

[39] Price leadership may help coordinate a collusive price even without passive stock acquisition: One of the firms (normally, the firm with the cost advantage) could be a "price leader", unilaterally determining the collusive price, while other firms follow. (see Scherer and Ross, *supra* note 33, at 248-261). Such a collusive leadership mechanism, however, is obviously favorable to the leader, which will tend to set a price consistent with its own interest. The competitors, which would prefer a different collusive price, may be reluctant to follow the price set by the leader (*id.*).

Other possibilities of coordination other than price leadership or the use of passive stock acquisition, may also exist. One possibility is that a "focal price" be tacitly determined by some external factor, such as a maximum price set by a regulatory agency, or the price charged by importers of competing products (*id.*, at 265-268).

acquisition to gain flexibility in determining the collusive price somewhere between the firms' disparate preferences.

This difference from regular price leadership is especially clear when the firm in which the investment is made is closely held (rather than publicly traded). Acquisition of a closely held firm's stock requires its consent, and cannot be achieved unilaterally by the investor. This is because, by definition of a closely held firm, the investor cannot purchase this firm's stock in the open market. Thus, passive stock acquisition involves an express contract between the investing firm and the firm in which the investment is being made. Since, as explained above, passive stock acquisition uniquely determines the collusive price, the agreement settling passive stock acquisition is analogous to an express agreement settling the collusive price. Such an arrangement is no doubt more flexible and less vulnerable to breakdown than regular price leadership (without passive stock acquisition), in which the price leader acts alone in determining the collusive price, and will be biased in favor of its own preference regarding the collusive price.

Moreover, in the case of passive stock acquisition, if the firms follow the strategies suggested here, it is clear that the investing firm is the leader. In the regular price leadership case, on the other hand, it sometimes is not clear who is the leader, and many times tacit collusion breaks down because more than one firm tries to take the lead.[40]

In addition to passive stock acquisition's possible role in determining a collusive price, it may give the firms flexibility in the way industry profits could be split among them. When the price paid for the purchased stock can be set not to equal the stock's true value, the difference between the price and the stock's true value may constitute a de facto side payment from one firm to the other. This will be the case where the firm in which the investment was made is closely held. In such a case, as stressed above, the price paid for the stock is determined by contract rather than by an active and open market. This can give the firms additional flexibility in splitting collusive profits.

To illustrate, suppose the low cost firm invests in the high cost firm's stock, which is closely held. While the true value of the stock purchased is $3, the low cost firm pays $5. Thus, the high cost firm gets a de facto side payment of $2.[41] This can compensate the high cost firm for a relatively low collusive price (closer to the collusive

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40 See Scherer and Ross, *supra* note 33, at 238-261.
41 Presumably, antitrust authorities will find it hard to detect differences between the price paid and the true value of the stock in cases of closely held firms.

price the low cost firm prefers) just as an explicit side payment does.[42]

Accordingly, passive stock acquisition can be used to achieve the same goals as explicit communication over the collusive price or side payments. If, unlike such explicit communication, passive stock acquisition is exempt from antitrust liability,[43] firms with different costs may use passive stock acquisition in order to overcome their conflict of interest regarding a collusive price. The obstacles firms face in the case of express communication over the collusive price, which is illegal when explicit and difficult to coordinate tacitly,[44] would not exist with passive stock acquisition.

Therefore, in the cost asymmetric case, passive stock acquisition not only facilitates tacit collusion by making price cutting less profitable.[45] It also helps coordinate a collusive price to begin with, by solving the conflict of interest regarding the collusive price.[46]

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42 See *supra* note 36.
43 As demonstrated *supra* in Part I and *infra* in Part VI.A, according to the leading cases, passive stock acquisitions are indeed de facto exempted from antitrust liability.
44 See *supra* note 36.
45 As shown *supra* in section A.
46 Recall from section A above (note 24 and accompanying text) that in the cost asymmetry case the low cost firm is, ceteris paribus, more "trigger happy". Thus investment by the low cost firm in the high cost firm's stock may simultaneously achieve two goals: It may commit the low cost

### C. Acquisition of a competitor's debt

Not only passive acquisition of a competitor's equity, but also acquisition of its debt, will facilitate tacit collusion. This will be the case when aggressive competition increases the probability of the competitor's insolvency. If a firm is a creditor of its competitor, and aggressive competition by the creditor raises the probability of the debtor's bankruptcy, the creditor may hesitate to compete aggressively, since this raises the probability that the debt will never be repaid.

Thus, in cases where the debtor is financially weak, or where aggressive competition by the creditor may significantly raise the probability of the debtor's insolvency, acquisition of debt may also be used as a strategic commitment by the creditor to compete less aggressively. A firm extending a loan to its competitor, under such circumstances, thereby commits to compete less aggressively. This may induce competing firms to behave less competitively themselves, to the benefit of the creditor.[47]

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firm not to price cut on the collusive price and, at the same time, may help coordinate such a collusive price to begin with.

[47] The intuition for this result is identical to the intuition in the stock acquisition case, analyzed *supra* in section A and in Part II.

In antitrust cases where a firm held debt in its competitor, as in the leading cases concerning stock acquisition, there was no discussion of this anticompetitive effect. As in the cases of stock acquisition, all that the courts worried about in the debt cases was whether the creditor will try to extend its influence on the debtor through its position as creditor.[48]

It should be noted, however, that the anticompetitive impact of debt acquisition is much more limited than that of stock acquisition. Acquisition of a competitor's debt makes the creditor less aggressive only to the extent that aggressive competition will sufficiently raise the probability of the debtor's insolvency. Acquisition of a competitor's stock, on the other hand, makes the stock acquirer share this competitor's ongoing profit flow. This profit flow is presumably always reduced by aggressive competition.

Furthermore, acquisition of debt in a competitor will not cause the creditor to become less aggressive if there is sufficient collateral (unaffected by aggressive competition)

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48 See Mr. Frank, Inc. v. Waste Management, Inc. 591 F.Supp. 859, 862,867 (N.D. Ill. 1984); Metro-Goldwyn-Mayer Inc. v. Transamerica Corporation, 303 F.Supp. 1344, 1351 (S.D.N.Y. 1969); United States v. Gillette Co., 55 FR 28312 (1990).

to guarantee the loan. In such a case, even if the debtor becomes insolvent by the creditor's aggressive competition, the creditor can still recover the debt from this collateral. Accordingly, the creditor will not be deterred from aggressively competing with the debtor.[49]

## V. Passive Investment by Controllers

We will now examine the case in which a firm's controller (be it a parent corporation, or an individual possessing active control of the firm) passively invests in this firm's competitor. Many examples of this form of stock acquisition (hereinafter termed "passive investment by controllers") can be found in practice. A striking example of passive investment by controllers, already revealed in the introduction, existed, for several years, in the car rental industry. National Car Rental's controller, GM, passively acquired a 25% stake in Avis, National's competitor. In this very same industry, it was reported that Hertz's controller, Ford, had acquired $324 million worth of

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49 This was probably the factual situation in the *MGM* case (303 F.Supp. 1344, at 1347), although none of this reasoning was discussed by the court.

possess control. It is easy to see that now firm 1's controller will refrain from making firm 1 price cut. The controller now gains only 55%x$3=$1.65 from a price cut, and looses 25%x$8=$2 (on account of the controller's 25% stake in firm 2). Since $1.65<$2, firm 1's controller will not make firm 1 price cut.

Therefore, the dilution of firm 1's controller's stake in the firm it controls (from 100% to 55%) made the controller manage firm 1 less aggressively. This is because the less stake the controller has in the firm it controls (firm 1) the more weight this controller places on its stake in firm 2, and the less aggressively is firm 1 managed under this controller. Indeed, if we were to dilute firm 1's controller's stake in firm 1 even more, the controller would gain even less from price cutting, while its loss from price cutting on account of its stake in firm 2 would be left unchanged. For example, if the controller of firm 1 owns only 50% (instead of 55%) of firm 1, the controller gains only 50%x$3=$1.5 (instead of $1.65) from making firm 1 price cut, while it still looses 25%x$8=$2, as before, from this price cut, on account of the controller's stake in firm 2.

The controller of firm 1 can thus invest in firm 2's stock in order to commit firm 1 (which is under the controller's control) not to price cut. Such a commitment can be valuable to the controller because it may induce firm

Budget's nonvoting stock.[50] Several additional examples exist in the case law.[51]

When a controller of a firm invests in this firm's competitor, it can be shown that the anticompetitive effect is even stronger than the case in which the firm itself invests in its competitor. Let us illustrate this by using a simple numerical example.

Suppose firm 1's controller (e.g., firm 1's parent corporation) passively acquires 25% of firm 2, which is firm 1's competitor. Suppose further that firm 1's controller initially holds 100% of firm 1. Assume that if firm 1 competes aggressively (e.g., price cuts), firm 1 makes \$3 but firm 2 looses \$8. Thus, firm 1's controller will make firm 1 price cut, because the controller makes 100%x\$3=\$3 from price cutting, and, on account of its 25% share in firm 2, looses only 25%x\$8=\$2, which is less than \$3.

Suppose now, however, that firm 1's controller holds only 55% of firm 1 instead of 100% of firm 1, as assumed before. The other 45% may be held, for example, by public shareholders, or by minority shareholders, that do not

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50 See Purohit et al., *Rentals, Sales and buybacks: Managing Secondary Distribution Channels*, 31 J. MARKETING RES. 325 (1994); Karen Talley *Avis Advertisements Fuel Questions* 49 BUSINESS NEWS 1, Dec 3, 1990.
51 See *infra* note 57.

2 to behave less aggressively itself.[52] As was illustrated in the above-mentioned example, the lower is firm 1's controller's stake in firm 1, the stronger is firm 1's controller's commitment to manage firm 1 less aggressively. Indeed, the controller can strategically strengthen its commitment to run the firm it controls (firm 1) less competitively, by selling out part of firm 1 to passive shareholders (be it the public, or other minority shareholders). This would reduce the controller's stake in the firm it controls, and thus strengthen the commitment value of the controller's stake in the competing firm (firm 2).

To illustrate, in the above-mentioned example, we have seen that if the controller of firm 1 owns 100% of firm 1, this controller could not commit not to price cut even though the controller held a 25% stake in firm 2 (because the controller gains $3 from price cutting and looses only $2 due to its stake in firm 2). The controller can commit not to price cut (thereby possibly inducing firm 2 not to price cut itself) by selling out 45% of firm 1, say, to the public.[53] After such a sell out, as we have seen, the

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52 As explained in the discussion of passive stock acquisition by the firms themselves, *supra* Parts II, III, and IV.

53 This is not to say that all decisions by controllers to sell out part of their firm are motivated by strategic commitments to compete less aggressively. Still, we should not overlook the fact that such motivations for strategic

controller will not decide on a price cut by firm 1 (because the controller gains only 55%x$3=$1.65 from such a price cut and looses $2).

The above-mentioned example illustrates how passive investment by controllers can serve as a stronger commitment to reduce competition than passive stock acquisition by the firms themselves. In this example, if it were firm 1 itself (and not firm 1's controller) that acquired 25% of firm 2's stock, firm 1 would not be committed not to price cut. Firm 1 would price cut, in such a case, regardless of firm 1's controller's stake in firm 1.

This is true in spite of the fact that it is firm 1's controller that will decide whether firm 1 price cuts. When firm 1 itself acquires 25% of firm 2's stock, the stake of firm 1's controller in firm 1 will not matter. Suppose, as above, that firm 1's controller holds 55% of firm 1. The controller gains 55%x$3=1.65 from making firm 1 price cut, and looses 55%x25%x$8=$1.1, on account of firm 1's stake in firm 2 (since the controller holds 55% in firm 1 and firm 1, in turn, holds 25% in firm 2--that is, the controller has an

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commitment exist when the controller of a firm has invested in this firm's competitor. These strategic motivations may be factored into the controller's decision to sell out part of the firm it controls and may affect the size of the block which is sold out.

indirect stake of 55%x25% in firm 2). Thus the controller will decide on a price cut by firm 1, because $1.65>$1.1.

The controller's stake in the firm it controls will always be irrelevant when it is the firm itself that invested in its competitor. This can be understood through the above-mentioned example: The controller's stake in firm 1 (55%) affects the controller's gains and losses from firm 1's price cut in equal proportions. In other words, if the controller's stake in firm 1 is diluted, this will not raise the weight the controller places on firm 1's stake in firm 2, because the controller's indirect stake in firm 2 will also be diluted proportionately.

There is another important feature of the analysis that should be illuminated. Note that we have assumed, throughout the above examples, that firm 1's controller does not maximize the total value of firm 1, but rather takes only its own private benefits into account when running the firm. Firm 1's controller was assumed to make the decision on whether firm 1 will price cut based on the profits and losses that the controller itself will make from such a price cut. The controller disregarded the profits of firm 1 that belong to passive investors (45% of firm 1's profits). If the controller would have maximized the total value of firm 1, including the profits that belong to passive investors, it can be shown that the controller's stake in the firm it controls (firm 1) would not matter. In such a case, dilution of the controller's stake will not possess an additional competition-reducing effect.

Conversely, the less account the controller takes of the profits going to firm 1's passive investors, the more the controller's stake in the firm it controls (firm 1) matters. As we have seen in the above-mentioned example, when the controller disregards profits going to firm 1's passive investors, dilution of the controller's stake in firm 1 makes the controller care less about firm 1 and thus makes the controller place more weight on its stake in firm 2. When the controller's stake in firm 2 weighs more, the controller is committed to manage firm 1 even less competitively. This anticompetitive effect will be stronger the less account the controller takes of the profits going to firm 1's passive investors.[54]

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54 Interestingly, disregard by a controller to the profits of passive investors in the firm it controls is normally seen as an "agency cost" which lowers the value of the passive investors' shares. The analysis in the text shows, however, that such disregard may be used as a commitment by the controller to manage the firm less aggressively, which may induce competitors to compete less aggressively themselves and enable supra competitive profits in the industry (*supra* Parts II, and IV.A.). In this sense, the very same "agency problem" also tends to raise the value of passive investors' shares, since it may enable the firm to earn supra competitive profits (see Gilo, *supra* note 16, section 2.2.2.B).

To sum up, these examples have shown that when it is a firm's controller (be it a parent corporation or an individual) that invests in this firm's competitor, the controller's stake in the firm it controls becomes important as well as the controller's stake in the competing firm. The controller will make the firm it controls compete less aggressively the larger the controller's stake in the competing firm <u>and</u> the smaller the controller's stake in the firm it controls. This is because the less stake the controller holds in the firm it controls, the more weight the controller places on its stake in the competing firm.[55]

From the preceding analysis flow several policy implications. First, in an oligopolistic setting, investment by a firm's controller in this firm's competitor should be viewed with even more suspicion and scrutiny than investment by the firm itself in its competitor. The former, as shown above, is potentially more harmful to competition[56] and,

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55 See Gilo, *supra* note 16, which deals with the tacit collusion case. The same reasoning applies to the anticompetitive effects of passive stock acquisition that exist without tacit collusion (analyzed in Part III). Reynolds and Snapp, *supra* note 16, reach similar results, presenting a model of a joint venture framework where controlling parents of joint venture plants invest in competing joint venture plants. They do not, however, consider the possibility of controllers to strategically dilute their stake in the firms they control to further reduce competition. As shown in Gilo, *id.*, controllers can do this by selling out part of their firm to public shareholders or other passive investors.

56 See *supra* note 53, and accompanying text.

moreover, involves no more efficiencies than the latter. Needless to say, the case law made no such distinction between investment by controllers and investment by the firms themselves.[57]

Second, in the case of investment by a firm's controller in this firm's competitor, the smaller the controller's stake in the firm it controls, the larger the anticompetitive harm. This is because the smaller the controller's stake in the firm it controls, the stronger the controller's commitment to make its firm compete less aggressively, as illustrated in the above-mentioned example.

This last point may seem counterintuitive at first blush. One could supposedly forward a technical (but wrong) test that examines the degree of "financial linkage" between the competing firms after the passive stock acquisition. According to such a test, there would be more linkage and

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57 For cases in which a firm's controller invested in the stock of this firm's competitor, see Gulf & Western Industries, Inc. v. Great Atlantic and Pacific Tea Co., Inc. 476 F2d 687 (2d Cir. 1973); United States v. Tracinda Investment Corporation, 477 F.Supp. 1093 (C.D.Cal. 1979); Denver and Rio Grande Western Railroad Co. v. United States, 387 U.S. 485 (1967); and United States v. Amax, 402 F.Supp. 956 (D.Conn. 1975). There are also at least two cases in which a firm's controller acquired debt in this firm's competitor: Mr. Frank, Inc. v. Waste Management, Inc. 591 F.Supp. 859, 862,867 (N.D. Ill. 1984); and Metro-Goldwyn-Mayer Inc. v. Transamerica Corporation, 303 F.Supp. 1344 (S.D.N.Y. 1969). In none of these cases was there made a distinction between investment by a firm's controller in this firm's competitor and investment by the firm itself.

thus, allegedly, more anticompetitive concern, when the controller has a larger stake in the firm it controls while possessing a stake in the competing firm as well. But it is clear from the preceding analysis that such a test is incorrect. The larger the controller's stake in the firm it controls, the less weight the controller places on its stake in the competing firm and the weaker the controller's commitment to manage its firm less competitively.

To illustrate, suppose a firm's controller invests in this firm's competitor, and, when attacked by an antitrust court or agency, the controller pledges to divest or dilute its holdings in the firm it controls (while retaining control). As our analysis demonstrates, this controller is actually offering not a reduction in the anticompetitive threat, but rather an exacerbation of this threat.

The same reasoning implies that managers of dispersedly held corporations, which often have negligible stakes in the firm they control, should optimally be prevented from holding even small stakes in a competing firm. When such managers possess very small stakes in the firm they control, even a small stake that they hold in a competing firm may constitute strong commitments by these managers to manage their firm less competitively. Thus, even small stakes such managers hold in competing firms may lessen competition substantially.[58]

## VI. Legal Implications

### *A. The de facto exemption granted to passive investment*

As was illustrated in detail in Parts II through V, even absolutely passive stock acquisitions of a competitor, in an oligopolistic setting, may possess substantial anticompetitive effects. As Part III shows, even without considering tacit collusion, the market becomes less competitive under passive stock acquisition: prices are higher and quantities smaller. Furthermore, passive stock acquisition can be used to facilitate tacit collusion, as shown in Part IV. Finally, Part V demonstrates how these anticompetitive effects are exacerbated in the case of passive investment by controllers.

In contrast, as Part I revealed, the leading cases have consistently ruled that a stock acquisition that is totally passive will be considered "solely for investment".[59] As

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58 See Gilo, *supra* note 16, section 2.2.2.B.
59 A recent example of the tautology that the cases draw between an acquisition "solely for investment" and a passive acquisition is the Department of Justice's decision in United States v. Gillette Co., 55 FR 28312 (1990). In this case, mentioned in the introduction, Gillette, the international and U.S. leader in the wet shaving razor blade

such, passive stock acquisitions, according to these leading cases, satisfy the first prong of the "solely for investment" exemption, and are eligible to a more lenient test than the main effects clause of section 7: It is only examined whether the passive stock acquisition possesses actual (rather than probabilistic) anticompetitive effects.[60]

Unfortunately, however, the anticompetitive effects of passive stock acquisitions, identified in Parts II through V above, are probabilistic in nature, and are very hard to actually observe or verify in court.[61] Thus, the leading

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market, has purchased 22.9% of the nonvoting stock and approximately 13.6% of the debt of Wilkinson Sword, an important competitor of Gillette, in a highly concentrated oligopolistic industry. The Department of Justice, assured by a consent decree (United States v. Gillette Co. 1990 WL 126485) that the investment will be totally passive, decided not to attack the transaction, while implying that the transaction may be exempt through the "'passive investment' exception" (using the DOJ's terminology, see 55 FR 28312, at 28322, 28323). The DOJ failed to address the anticompetitive effects inherent in such a passive stock acquisition. In this case a large stake (both of stock and debt) was acquired, the industry was oligopolisticly structured, and the parties to the transaction were large oligopolists (the investor was the industry's leader and the firm in which the investment was made was one of its largest competitors). According to the analysis of Parts II through IV, all of these characteristics suggest a substantial anticompetitive effect.

60 See *supra* note 8, and accompanying text.

61 The anticompetitive effects of passive stock acquisition are, in this sense, similar to the anticompetitive effects feared in full blown mergers. In the context of mergers, it was precisely the probabilistic nature of these anticompetitive effects that caused courts to consistently rule that "[Clayton Act Section 7] can deal only with probabilities, not with certainties." (F.T.C. v. Procter &

cases' interpretation grants a de facto exemption to passive stock acquisitions. In particular, the anticompetitive effect of passive stock acquisition in reducing quantities and raising prices, even without tacit collusion, is very hard to observe or verify in court. Quantities and prices could change from an array of benign industry factors, such as shifts in costs or demands. Constant scrutiny by courts over industry quantities and prices would turn courts into actual regulators, which they are not.

The same is true, to a great extent, with regard to the effect of passive stock acquisition in facilitating tacit collusion. Tacit collusion consists of unilateral mutually interdependent behavior that is not accompanied by any form of agreement between the parties. Courts and agencies will find it hard to detect tacit collusion and verify it in court.

Accordingly, it would be almost impossible for a plaintiff to prove <u>actual</u> anticompetitive effects of a passive stock acquisition (under the "solely for investment" exemption's second prong test). These anticompetitive

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Gamble Co. 386 U.S. 568, 577 (1967)). Mergers, obviously, do not qualify for the "solely for investment" exemption". They are therefore scrutinized under the main effects clause of Clayton Act Section 7, which was consistently construed as condemning even probabilistic (and not only actual) anticompetitive effects. See *supra* note 8.

effects, namely, reduced quantities, elevated prices, and tacit collusion, are almost impossible to actually prove in court. All the plaintiff might by able to show is that passive stock acquisition may (in the probabilistic sense) substantially lessen competition.[62]

### *B. An alternative interpretation of the "solely for investment" exemption*

As stressed in section A above, the interpretation given to the "solely for investment" exemption in the leading cases is unwarranted, because it fails to address the anticompetitive effects of passive stock acquisitions. We believe that the "solely for investment" exemption can, and should, be construed differently, to take account of the anticompetitive effects of passive stock acquisitions.

The main flaw in the leading cases cited in Part I of the article is that they seem to be concerned only with the active influence the acquirer of the stock may gain over the behavior of the firm in which the investment had been made. These leading cases neglect the effect stock acquisition will have on the stock acquirer itself, namely, making the

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62 See *infra* section B.

stock acquirer a less aggressive competitor. Both effects, however, deem the acquisition not "solely for investment".

The leading cases presume that passive stock acquisitions are necessarily "solely for investment" purposes. The analysis of Parts II through V shows that this is not the case. Even totally passive stock acquisitions may be used strategically by the stock acquirer as a commitment device to reduce competition. Such passive stock acquisitions are therefore not "solely for investment" purposes and do not qualify for the exemption.[63] It is important to acknowledge the difference between an investment in the stock of a competitor that is solely for investment (i.e., solely for the return the investor hopes to gain on the stock, diversification of the investor's portfolio, etc.), and an investment in a competitor's stock than can be used strategically to reduce competition. The latter should not be viewed by sound policy as solely for investment.

Consequently, in an oligopolistic setting, when one firm makes a significant (although passive) "investment" in

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63 The only decision that identified this point, and will be discussed in detail below, is the FTC's decision in Golden Grain Macaroni, 78 F.T.C. 63 (1971), *modified in other respects*, 472 F.2d 882 (9th Cir. 1872), *cert. denied*, 412 U.S. 918 (1973). See also Areeda and Turner, *supra* note 22, at 325.

a major competitor,[64] this firm cannot claim that the acquisition of the stock is "solely for investment". Such a stock acquisition does not qualify for the "solely for investment" exemption, because, as shown in Parts II through V, it commits the acquirer of the stock to compete less aggressively. Furthermore, such a commitment may induce other oligopolists to behave less competitively themselves. Therefore, such a stock acquisition must be scrutinized under the main effects clause of Clayton Act Section 7. That is, there must be a full blown investigation of market conditions to establish whether the stock acquisition, although passive, may substantially lessen competition.[65]

The same policy goal of preventing the anticompetitive effects of passive stock acquisitions can be achieved, in principle, through provisions other than Clayton Act Section 7. First, passive stock acquisitions of competitors constitute agreements. As Parts II through V above have shown, such agreements, in an oligopolistic setting, may restrain trade, by making the relevant market less competitive. Therefore, such passive stock acquisitions can, in principle, be condemned through Sherman Act Section 1,

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64 As, for example, in the above-mentioned *Gillette* case, 55 FR 28312.

65 The economic analysis of Parts II through V may provide some guidelines to assist in such an examination.

which condemns "[e]very contract...in restraint of trade...".[66]

Second, the broad language of Federal Trade Commission Act Section 5,[67] condemning "[u]nfair methods of competition" may (or at least should) be construed to condemn passive stock acquisitions of competitors in oligopolistic industries, when such acquisitions are likely to lessen competition in the way described in Parts II through V above.[68]

The single decision which touches on the policy concerns presented in this article is the Federal Trade Commission's decision in Golden Grain Macaroni Co.[69] , which involved a 49% stake that respondent Golden Grain Macaroni held in Porter Scarpelli, its largest competitor in the

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66 26 Stat. 209 (1890), codified as amended, 15 U.S.C.A. §§1-7 (1987).
67 38 Stat. 717 (1914) (codified as amended, 15 U.S.C.A. §§ 41-8 1987).
68 Admittedly, the Second Circuit in du Pont v. Federal Trade Commission, 729 F.2d 128 (2d Cir. 1984) gave Federal Trade Commission Act Section 5 a narrower interpretation. This decision did not allow condemnation of a most favored consumer clause through Federal Trade Commission Act Section 5. A most favored consumer clause, as passive stock acquisition, may be used to facilitate supra competitive pricing in oligopolistic settings (see Thomas E. Cooper, *Most-Favored-Customer Pricing and Tacit Collusion* 17 *RAND J. ECON.* 377 (1986)).
69 78 F.T.C. 63 (1971), *modified in other respects*, 472 F.2d 882 (9th Cir. 1872), *cert. denied*, 412 U.S. 918 (1973).

Pacific North-West macaroni market.[70] The decision states that:

> Given the relationship of the firms involved here (i.e., major competitors in an oligopolistically structured market) and [Golden Grain's] percentage of ownership in Porter-Scarpelli (i.e., 49%), the acquisition was bound to affect the operations of [Golden Grain] in a way that an acquisition made 'solely' for investment would not. [Golden Grain] can reasonably be expected to hesitate in engaging in vigorous competition with Porter Scarpelli as it might jeopardize [its] investment.[71]

Surprisingly, this reasoning is the only one found in the case law which shows an understanding of the anticompetitive effects involved in passive stock acquisition. The decision acknowledges that when a firm holds a stake in a competitor, in an oligopolistic market, this may make the firm holding such a stake less aggressive.[72] Such an effect, as the decision rightfully states, deems the acquisition not <u>solely</u> for investment and

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70 The evidence supported the conclusion that Golden Grain was a passive investor (*id.*, at 76).
71 *Id.*, at 172.
72 The strategic motivation that drives a firm to commit to be less aggressive in such a way ex ante is not discussed in the decision. See *supra* Part II for a discussion of this motivation.

makes such an acquisition unqualified for the "solely for investment" exemption.

It should be stressed, however, that in the *Golden Grain* case the commission was also driven by the fear that Golden Grain will acquire control in the future (by acquiring an additional 2% of Porter Scarpelli or in other ways), and based its order to divest the stock also on the threat of such future control.[73]

## C. Efficiencies

The obvious question arises whether, despite the anticompetitive harm that may be caused by passive stock acquisitions, they involve redeeming efficiencies. Although a conclusive investigation of efficiencies is beyond the scope of this article, let us make a few observations in this respect.

By definition, efficiencies and synergies usually associated with common control of two merging firms do not exist in passive stock acquisitions. Both firms, after the stock acquisition, are managed independently, as they were before the acquisition. Thus, if more subtle efficiencies are not found in passive stock acquisitions, or are

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73 *Golden Grain*, 78 F.T.C. 63, at 172.

insubstantial, there is a stronger case for condemning passive stock acquisitions than there is for condemning full mergers. Even if the anticompetitive effects of passive stock acquisitions are smaller than those of a full merger, there are no significant countervailing efficiencies that could make the transaction desirable.[74]

One possible efficiency of passive stock acquisition that may be advanced, and is worth further study, is related to the superior information a competitor may have as compared with an ordinary investor. A firm's competitor is likely to have superior information regarding this firm, its product market, and its prospects. This is due to the competitor's day to day operation in the same market. Thus, passive stock acquisition by a competitor may be an efficient way of raising capital for the firm in which the investment is made. It should be noted that this point will have some merit only under the assumption that imperfect information on the part of other potential financiers makes financing by them less efficient.

Passive stock acquisition of a competitor may also be argued to be a form of risk diversification for the acquirer of the stock. Greater diversification, however, can readily

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[74] See Areeda and Turner, *supra* note 22, at 321; Denver and Rio Grande Western Railroad Co. v. United States, 387 U.S. 485, 496 (1967).

be achieved without passive stock acquisition of a competitor, by investment in a diversified portfolio, which does not involve anticompetitive harm.

Another possible efficiency of passive stock acquisition is that passive stock acquisition involves profit sharing, which may solve problems of incomplete contracting between the parties.[75] This point arises only where the parties to the passive stock acquisition are also vertically related, that is, also buy something from, or supply something to, one another.

An example of such a situation is where one firm licenses its technology to its competitor. Licensing agreements have been shown to be incomplete and the licensor generally faces difficulties in appropriating the returns on its technological innovation.[76] Investment by the technology's licensor in the licensee's stock may assist the licensor in appropriating these returns.[77] Passive stock

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75 See generally, OLIVER HART, FIRMS, CONTRACTS, AND FINANCIAL STRUCTURE Ch. 2 (1995).

76 See Richard E. Caves, Harold Crookell & Peter Killing, *The Imperfect Market for Technology Licenses* 45 OXFORD BULL. ECON. STAT., August 1983, at 249.

77 There is statistical evidence that in the case of international licensing agreements, many licensors report returns from investment in the licensee's stock as a considerable fraction of their total returns from licensing. See ENID BAIRD LOVELL, APPRAISING FOREIGN LICENSING PERFORMANCE (1969), ROBERT W. WILSON, THE SALE OF TECHNOLOGY THROUGH LICENSING, Reproduced by National Technical Information Service, U.S. Department of Commerce 27 (1975).

acquisition can serve such a function, however, only if the stock is granted free of charge or for a disproportionately low price. If the price paid for the acquired stock equals the expected profit that the stock brings, passive stock acquisition cannot assist in appropriating the returns from innovation. Whatever the licensor receives through passive investment in the licensee's stock, it has to pay ex ante when acquiring the stock.

Finally, passive stock acquisition may involve efficiencies in the allocation of production among firms. That is, it may cause more efficient firms to produce more of the industry's output, while causing less efficient firms to produce less of the industry's output.[78] Such an efficiency is most likely to arise when a less efficient (high cost) firm invests in the stock of a more efficient (low cost) firm. Recall that when there is no tacit collusion going on in the industry, a high cost firm that has invested in a low cost firm's stock will become less aggressive and thus reduce its output.[79] In some cases, the

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[78] Although the claim of countervailing efficiencies in production allocation is valid from a welfare point of view, it is not clear how much courts and antitrust agencies take efficiencies in the allocation of production into account when assessing a transaction such as a merger or a passive stock acquisition. The Department of Justice and Federal Trade Commission 1992 Horizontal Merger Guidelines, 57 FR 41552, for example, do not specifically cite improved allocation of production as one of the efficiencies to be considered in assessing a merger (*id.*, at section 4).
[79] As explained *supra* in Part III.

low cost firm reacts to this reduction of output by an expansion of its own output. Here, although aggregate output in the industry is reduced as a result of passive stock acquisition,[80] the allocation of output becomes more efficient.[81] The high cost firm produces less of this industry output, while the low cost firm produces more than before.[82]

When it is a low cost firm investing in the stock of a high cost firm, the claim of countervailing efficiencies in the allocation of production becomes doubtful. Under the assumption that firms react to their competitor's reduction of output by an expansion of their own output, investment in the stock of the high cost firm by the low cost firm brings less efficient allocation of production. The low cost firm will reduce output (due to its investment in the high cost firm) and the high cost firm will react by expanding its output. Thus, due to such passive stock acquisition, not only is total industry output reduced,[83] but also more of

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80 *Supra* Part III, note 19 and accompanying text.
81 This was shown, in a formal model, by Joseph Farell and Carl Shapiro, *Asset Ownership and Market Structure in Oligopoly* 21 RAND J. ECON. 275 (1990).
82 This result is much less clear in cases where the low cost firm reacts to the high cost firm's reduction in output by reducing its own output (see *supra* note 18). Still, the same claim of increased efficiency in output allocation may continue to hold if the low cost firm reduces output by less than the high cost firm's output reduction.
83 See Part III, note 19 and accompanying text.

the industry's output will be produced by the less efficient, high cost, firm.[84]

## D. Remedies

In cases where passive stock acquisition may substantially lessen competition, the only effective remedy is divestiture of the acquired stock. A decree aimed at merely restricting conduct, short of divestiture, would be unfeasible. Many of the decrees seen in the case law were meant to assure the court that the acquirer of the stock will not use its ownership of the stock to influence the behavior of the firm in which the investment was made, obtain sensitive information, elect a board member, vote the stock, and so on.[85] All that such a decree provides is that the acquirer of the stock remain a passive investor. Such a decree obviously does not prevent the anticompetitive harm caused by passive stock acquisitions.

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84 The analysis is more complex if the high cost firm reacts to the low cost firm's reduced quantity by itself reducing quantity (see *supra* note 18). If the high cost firm reduces quantity by more than the low cost firm reduced quantity, passive stock acquisition would involve a countervailing (although very subtle) efficiency in production allocation.

85 See Anaconda Co. v. Crane Co., 411 F.Supp. 1210, 1219 (S.D.N.Y. 1975); United States v. Tracinda Investment Corporation, 477 F.Supp. 1093, 1098 (C.D.Cal. 1979); United States v. Gillette Co., 55 FR 28312 (1990); United States v. Gillette Co. 1990 WL 126485; Hamilton Watch Co. v. Benrus Watch Co., 114 F.Supp. 307, 315-316 (D.Conn. 1953), *aff'd*, 206 F.2d 738 (2d Cir. 1953).

Moreover, it would be very difficult to enforce a decree according to which the firms would refrain from anticompetitive conduct, such as tacit collusion. Since tacit collusion is hard to detect or enforce against, such a decree would usually be ineffective. This point is even stronger when considering the anticompetitive effects of passive stock acquisition that exist even without tacit collusion.[86] These effects (higher prices and lower output) involve unilateral pricing and output decisions that cannot, and should not, be monitored by courts or agencies on an ongoing basis.[87]

Not only is divestiture the only effective remedy in the case of an anticompetitive passive stock acquisition, it is also much less complicated than in the case of mergers that bring the firms under joint control.[88] All that is needed to implement divestiture of a passive stock acquisition is selling out the stock. When the stock is publicly traded, such a sell out seems relatively easy. When the stock is not publicly traded, divestiture would be more difficult, but still usually far less complex than divestiture is in the complete merger case.

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86 *Supra* Part III.
87 See *supra* note 61, and accompanying text.
88 See Areeda and Turner, *supra* note 22, at 323.

Furthermore, with a clear rule according to which an anticompetitive passive stock acquisition will lead to divestiture, such passive stock acquisitions would be less likely to occur to begin with, in which case actual use of the remedy would not be needed.

## VII. Conclusion

The leading antitrust case law shows a pattern of exempting passive investments by firms in their competitors. In contrast, as the article demonstrates, even a totally passive investment in a competitor's stock (or debt), in an oligopolistic market, may possess substantial anticompetitive effects. Such an investment can be used strategically as a commitment by the investor to compete less aggressively. This commitment to compete less aggressively may, furthermore, induce other firms to behave less competitively themselves. Passive investment in a competitor's stock was shown to raise industry prices even if there is no tacit collusion in the industry. Moreover, passive investment in a competitor may facilitate tacit collusion. Therefore, a reconsideration of the current antitrust treatment of passive investment in competitors is warranted.