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ANTITRUST ISSUES CRITICAL TO STRUCTURING VERTICAL CHANNELS OF DISTRIBUTION FOR COMPUTER BUSINESSES

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I. INTRODUCTION

Hundreds of hardware and software developers have proven their genius at creating products with incredible technical capabilities. But, superb research and development alone cannot make a successful computer business. Products must be marketed. Inefficient distribution can condemn technically-efficient products to commercial failure. As computer businesses attempt to match their technical achievements with ingenious distribution arrangements, concerns arise as to what types of restraints on suppliers, distributors, and users are prohibited by the U.S. antitrust laws.

This Article provides a framework for analyzing antitrust issues critical to structuring vertical channels of distribution for computer businesses. Section II explains the purpose of the antitrust laws in terms of promoting consumer welfare and protecting competition. Section III describes the concept of market power and discusses the degree to which computer businesses possess such power. Section IV explains the economics of structuring vertical channels of distribution. Section V analyzes several antitrust violations which require some market power: non-price vertical restrictions, tie-ins, monopolization, and attempted monopolization. Finally, section VI analyzes several antitrust violations which do not require market power: price discrimination, vertical price fixing, conspiracy, and group boycott.¹

II. PURPOSE OF THE ANTITRUST LAWS

The United States Supreme Court, in interpreting the purpose of the antitrust laws, stated that "Congress designed the Sherman Act as a 'consumer welfare prescription.'"² Consumer welfare or satisfaction increases when there is a rise in the quality of a product with no rise in its price, or when there is a decline in its price with no decline in its quality. Under these conditions, the quantity of the product demanded rises and there is a corresponding increase in output (quantity of the product supplied). Conversely, a decline in the output of a product is associated with a rise in its price with no corresponding quality improvement, or quality deterioration with no price decrease, thus resulting in a loss of consumer welfare.

¹. This Article does not attempt to cover all antitrust aspects of structuring vertical channels of distribution.

Generally, competition promotes consumer welfare by encouraging the availability to consumers of quality/price combinations for a product which they find attractive. Competition causes firms to fail when they do not provide consumers with an attractive quality/price combination.

Soon after enactment of the Sherman Act, the Supreme Court observed that the Act does not prohibit all restraints of trade, only those which unreasonably dampen competition. More recently, the Court held that the antitrust laws condemn restraints on competition only when the restraints restrict output, i.e., lead to a drop in consumer welfare by raising price or lowering quality.

Stated differently, the purpose of the antitrust laws is to protect competition. They protect particular competitors only to the extent that competition is threatened by conduct affecting those competitors. A competitor harmed by a restraint which does not lessen competition is not protected by the antitrust laws. To illustrate this distinction, suppose that there are one hundred retailers selling microprocessors in Los Angeles, supplied by fifty manufacturers, with no retailer or manufacturer having a share of sales in Los Angeles of over five percent. If one microprocessor manufacturer imposed a distribution restriction which forced one retailer out of business (e.g., prohibited sales from one location), there would be no effect on the microprocessor quality/price combinations available to consumers in L.A. The output of microprocessors supplied and demanded would be unchanged. Competition among the remaining retailers and among the manufacturers would remain vigorous. The loss of one retailer would not lessen competition or consumer welfare. In this case, the antitrust laws would not condemn the restraint or provide a remedy for the retailer.

The Robinson-Patman Act, dealing with price discrimination, and the attempt-to-monopolize portion of Sherman Act section 2 extend the prohibitions of antitrust law to include conduct which poses a reasonable possibility of substantially impairing competition. They attack possible harms to consumer welfare at their incep-

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5. Broadcast Music v. Columbia Broadcasting Sys., 441 U.S. 1, 19-20 (1979) (holding that a price fixing arrangement that did not restrict output was not per se unlawful).
tion, at the stage when there may be harm to a competitor but not to competition. In addition, some categories of Sherman Act section 1 violations are based upon a presumption that certain conduct almost invariably impairs consumer welfare, without requiring actual proof of harm under certain circumstances. Still, concern for consumer welfare is a unifying theme of the antitrust laws.

III. MARKET POWER

Monopoly or market power is defined as the ability of a firm (or group of firms, acting jointly) to raise its price above the competitive level without driving away so many customers as to make the price increase unprofitable. The possession of market power is closely related to the ability to affect consumer welfare. A firm with market power could impair consumer welfare by raising its price or lowering the quality of its product, resulting in lower consumer demand. A similar attempt by a firm without market power would have no effect on output (because of the availability of output from competing suppliers at competitive quality/price combinations) or on consumer welfare.

Returning to the illustration of retail distributors of microprocessors in Los Angeles, no microprocessor manufacturer or retailer possesses market power. If one microprocessor manufacturer attempted to charge a supracompetitive wholesale price or to impose burdensome terms on its retailers, it would not be able to sell its product. Retailers would turn to other suppliers or be forced out of business, finding that they could not make sales while earning competitive profits on this product. In light of the abundance of other manufacturers and retailers, this manufacturer's actions would have no impact on the quality/price combinations available to microprocessor customers in Los Angeles or on the quantity of output demanded. The same analysis applies to one manufacturer's or retailer's attempt to impose upon consumers unattractive terms for product usage, quality, or price. The distribution practices adopted by one supplier without market power cannot impair consumer welfare.

Generally, an efficient firm is constrained by the availability of close demand and supply substitutes for its product (cross-elasticity of demand and supply) from charging more than a price which will give it a competitive rate of return on its investments. As an exam-

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ple of demand and supply substitution, a supracompetitive price for one microprocessor brand would cause a demand response. Some potential buyers of that brand instead would purchase another brand of microprocessor, while other potential buyers instead would purchase a minicomputer, mainframe, or services on a timesharing system. In addition, a supracompetitive price for one microprocessor brand would cause a supply response. Other suppliers of microprocessors would increase their output and new suppliers of microprocessors might emerge, with manufacturers of minicomputers and mainframes being likely entrants into manufacturing microprocessors. Demand and supply substitution would make a supracompetitive price for a brand of microprocessors unprofitable by diverting sales from that brand.

A rough indicator of a firm's market power often used by courts is a high share of a relevant market.9 A relevant market has both product and geographic dimensions and should be delineated to include close demand and supply substitutes for the firm's sales.10 According to the preceding example, the product market for one brand of microprocessors includes other microprocessor brands, minicomputers, mainframes, and timesharing services. The geographic market for microprocessors is nationwide and extends to some foreign countries as well. Reasons for this include low transportation costs, ease in establishing retail outlets in an area, and little need to alter the physical product for sales in different areas.

While intellectual property such as patents, copyrights, trade secrets, or trademarks may be valuable to its owner, it does not necessarily confer market power on a firm. Analysis of demand and supply substitutability may show that competitive alternatives are available to buyers (e.g., it may be possible to "invent around" a patent or to create non-infringing software that is functionally compara-

9. See, e.g., Broadway Delivery Corp. v. United Parcel Serv. of Am., 651 F.2d 122, 129 (2d Cir. 1981) ("a market share below 50% is rarely evidence of monopoly power, a share between 50% and 70% can occasionally show monopoly power, and a share above 70% is usually strong evidence of monopoly power"); cert. denied, 454 U.S. 968 (1981); Ron Tonkin Gran Turismo, Inc. v. Fiat Distrib., 637 F.2d 1376, 1387 (9th Cir.) (firm with very small share of the relevant market, total automobile sales, had insignificant market power); cert. denied, 454 U.S. 831 (1981); Landes & Posner, supra note 8, at 938.

ble to copyrighted software). In such cases, the owner of intellectual property does not dominate a relevant market.\textsuperscript{11}

Rarely is a relevant market confined to a single brand.\textsuperscript{12} In the case of computer products, each court that has addressed the issue has refused to limit a relevant market to a single manufacturer’s products; that is, courts have recognized the existence of vigorous interbrand competition in computer products.\textsuperscript{13} One court observed:

The evidence points to a broad, dynamic, highly competitive market in which numerous vendors of microprocessors, minicomputers, and mainframes compete to offer original equipment manufacturers (OEMs) all purpose computer solutions designed to meet a variety of end-user needs. . . . Computer vendors of different instruction sets are all offering OEMs general-purpose solutions for the OEMs to meet end-user needs for a broad variety of applications. The end-user can in turn choose from among the solutions offered by the OEMs of different manufacturers. . . . Thus, the relevant market must also be defined by the competition to meet end-user needs.


\textsuperscript{13} See, e.g., Gen. Business Sys. v. North Am. Philips Corp., 699 F.2d 959, 965 (9th Cir. 1983) (relevant market was market for all plug-compatible computers, not just magnetic ledger cards); In re Data Gen. Corp. Antitrust Litig., 529 F. Supp. 801 (N.D. Cal. 1981) (one relevant market of all general-purpose minicomputers and microprocessors, another relevant market of all operating-systems software which will run on such minicomputers and microprocessors); ILC Peripherals Leasing Corp. v. IBM Corp., 458 F. Supp. 423 (N.D. Cal. 1978) (relevant market of plug-compatible peripherals was IBM and non-IBM market because of ease of conversion and system competition), \textit{aff’d sub nom.} Memorex v. IBM Corp., 636 F.2d 1188 (9th Cir. 1980), \textit{cert. denied}, 452 U.S. 972 (1981); Telex Corp. v. IBM Corp., 510 F.2d 894 (10th Cir.), \textit{cert. dismissed}, 423 U.S. 802 (1975); Kaplan v. Burroughs Corp., 611 F.2d 286 (9th Cir. 1979) (no evidence that only Burrough’s computers comprised relevant market), \textit{cert. denied}, 447 U.S. 924 (1980).
needs, since it is the demand of end-users which determines what computer systems OEMs will buy and what systems vendors will sell.\textsuperscript{14}

The court then rejected plaintiffs' claims that the existence of some customers "locked-in" to defendant's minicomputer operating system proves that there is a relevant market limited to that operating system or to operating systems which run on defendant's instruction set.\textsuperscript{15}

Over the past several decades no court has found that any computer business — hardware manufacturer, software developer, service provider, or retailer — possesses market power. Relevant product and geographic markets are broad. On the demand side, customers compare the products and services of numerous suppliers. Their comparisons often encompass a broad range of alternative configurations and packages to meet their needs. On the supply side, engineering and marketing resources can be readily shifted across types of products and technical specifications. Rapid and pervasive entry belies claims of substantial entry barriers or dominance.\textsuperscript{16} Also, many computer businesses operate over a large geographic area. The importance of this evidence will be discussed in section V.

IV. ECONOMICS OF STRUCTURING VERTICAL CHANNELS OF DISTRIBUTION\textsuperscript{17}

This section surveys some economic considerations affecting a typical manufacturer's choice of a distribution system.\textsuperscript{18} There are reasons, consistent with increasing consumer welfare, why manufac-
turers choose to restrict the activities of their distributors and users. Since the antitrust laws do not demand that a manufacturer prove that a particular production process is best for consumers, there is no greater reason for scrutinizing the choices of distribution systems in competitive markets.

A. IMPLEMENTING THE MOST EFFICIENT DISTRIBUTION SYSTEM

A fundamental principle is that any manufacturer — whether a monopolist, oligopolist, or seller in a competitive market — maximizes its profits by selecting the most efficient distribution system. The theory behind this is that a manufacturer's profits equal the amount it sells multiplied by the amount by which price exceeds cost for each unit. One cost factor is the cost of getting the product from the factory to the consumer. The manufacturer perceives this cost as the difference between the wholesale and retail prices. Just as a manufacturer attempts to minimize production costs consistent with producing a certain quantity and quality, it attempts also to minimize its distribution costs. For any given level of sales, it seeks the highest wholesale price, thus maximizing its profits. At any given wholesale price, it seeks to maximize sales, which generally increase as retail prices decrease.

Sometimes a manufacturer can realize its lowest distribution costs by direct distribution (vertical integration). At other times independent distributors are more efficient. The manufacturer takes the lower-cost route. An inefficient and more costly distribution system results in lower consumer demand and lower manufacturer profits.

Choosing a method of distribution is complicated by the fact that the distributor, no less than the manufacturer, controls certain elements of the delivered product's attributes. A manufacturer can determine some elements (e.g., the software's functional capabilities or the processor's instruction set) in its plant. Other elements, such as the quality of information, display, and warranty services, are out of the manufacturer's direct control unless the manufacturer is fully integrated vertically. Yet, the manufacturer wants to pick these dealer-influenced product attributes, just as it wants to pick the attributes wholly within its own control, so as to maximize the product's attractiveness to consumers. These product attributes are demand-developing and procompetitive.

The interests of consumers and of the typical manufacturer in adopting efficient distribution tend to be congruent. The manufac-
turer seeks to maximize demand for its product by providing, or as-
suring dealer incentives to provide, the most attractive combination
of attributes, including promotional services and price, to consum-
ners. Consumers buy more only if the resulting combination of at-
tributes and price is more desirable than that provided by
alternative distribution systems. While there may be a loss of wel-
fare for some consumers preferring lower prices and fewer serv-
ces, a manufacturer would still seek to have a service provided
when the lower demand of such consumers is outweighed by the
higher demand of consumers who prefer more services and are will-
ing to pay a higher price for those services. The considerations are
identical to the question of whether a manufacturer will make a
higher quality (but more costly) product at the plant.

B. FREE RIDING AND RESTRICTED DISTRIBUTION

By investing in services to promote a product, one distributor
may develop demand or save costs for another distributor of the
same product. If the second distributor reaps the benefits of the
first distributor's services without undertaking the costs of providing
similar services itself, it is "free riding" on the services provided by
the first distributor.

Free riding by some distributors undermines the service-provid-
ing dealer's incentive to undertake the costs of providing demand-
enhancing services. Because a free rider has lower costs, it can
charge less than the service-providing dealer, and attract part of the
increased demand developed by the latter's efforts. As the service
provider loses sales to free riders, its incentive to provide services
decreases. Consequently, a service provider may respond to compe-
tition from free riders by dropping costly services, even though con-
sumers value the product attributes at more than the costs of
providing them.

Free riding may make unrestricted dealer rivalry inefficient
from both the manufacturer's and the consumers' perspectives. Free
riding may result in a combination of attributes that neither
wants, such as a lower level of services. The manufacturer has the
incentive to overcome free riding in the most efficient manner in or-
der to gain the demand-maximizing combination of dealer services
and retail prices, that is, to deliver the desired product at the lowest
total cost.

There are a variety of ways for a manufacturer to structure its
distribution system to overcome free riding. Restricting dealers' ter-

19. For convenience, all dealer-supplied product attributes are referred to as
"services", without limiting the scope to the traditional meaning of that term.
ritories, customers, methods of selling, or product usage may be effective ways to benefit consumer welfare. For example, a distributor with an exclusive territory is able to capture more of the benefits (increased demand) from its investment in services than when a free rider shares that territory. A customer attracted to a product by the demand-stimulating services of a dealer is more likely to buy from that dealer if a free-riding dealer is not selling the same product in the same area. The increase in the dealer's sales replaces the need for a direct payment from the manufacturer to the dealer for providing the service, with possibly lower administration and monitoring costs. If a system of exclusive territories is not an efficient method of distribution (i.e., does not maximize demand for the product by achieving the right mix of services and prices), the typical manufacturer will have an incentive to replace it with a superior distribution system.

Other distribution restrictions which may reduce free riding and thereby promote consumer welfare include limiting sales by a dealer to a certain class of customers (e.g., hospitals), requiring that dealers utilize a sales method involving promotional services (e.g., forbidding mail-order sales), or enforcing usage instructions (e.g., forbidding a software buyer to copy and resell the software). A manufacturer imposing restrictions on any or all of its dealers would do so to maximize the efficiency of distribution by all its retail outlets. The manufacturer would encourage the provision of services by dealers only if those services stimulate demand (i.e., if in the aggregate consumers prefer the bundle of attributes to a set with fewer services). It will replace distributors providing a suboptimal combination of attributes. This is the same rationale that applies to product attributes which the manufacturer can control at the plant, forcing all aspects of choice toward those favored by consumers.

V. ANTITRUST VIOLATIONS REQUIRING MARKET POWER

This section synthesizes the discussion of the antitrust goal of promoting consumer welfare, the inability of a firm lacking market power to impair consumer welfare, and the manufacturers' incentives to use distribution restrictions in ways which promote consumer welfare. Three categories of antitrust claims requiring some market power will be explored in this section: (1) unilaterally-imposed non-price vertical restrictions; (2) tie-ins; and (3) monopolization and attempted monopolization. Recall the evidence discussed

in section III suggesting that no computer business possesses market power. The implication of this evidence is that while computer businesses should not act so as to invite antitrust suits which are costly to defend, they do not appear to meet a critical criterion for liability for these three categories of antitrust claims.

A. UNILATERALLY-IMPOSED NON-PRICE VERTICAL RESTRICTIONS

As explained in section IV, a manufacturer unilaterally may decide to impose non-price restrictions on its dealers to overcome free riding, and thereby promote consumer welfare. Two examples of such restrictions will be noted. (1) Geographic or customer restraints: A television manufacturer with a small share of national sales limited the number of its franchisees in a territory and their locations. The acknowledged purpose of decreasing the number of competing retailers of the brand in a territory was to attract more aggressive and competent retailers thought necessary to improve the brand's position in interbrand competition.21 (2) Method-of-selling or usage restraints: A microwave oven manufacturer with a small market share attempted to improve its market position by gaining a reputation for quality. It required its dealers to provide services, such as inspection of the ovens after shipment, installation for buyers, advertisements, special displays, demonstrations, trained salespersons on the floor to answer questions, warranty and repair services, and cooking schools.22

The leading case on unilateral non-price vertical restrictions is Continental TV v. GTE Sylvania, Inc.23 Recognizing the economic effect of free riding, the Supreme Court held that such restraints should be evaluated under the Rule of Reason, which requires a determination of whether, on balance, they suppress or promote competition under the circumstances of a particular case. The Court identified interbrand competition as "the primary concern of antitrust law."24

When interbrand competition is vigorous and vertical restraints reduce intrabrand competition but promote interbrand competition, the restraints are typically found lawful. Appellate courts have con-

cluded that a restraint imposed by a firm lacking market power should be presumed to be pro-competitive without further burden-
some analysis of the purpose of the restraint or market conditions, since the firm's actions cannot impair consumer welfare.\textsuperscript{25} Rule of
Reason analysis also has been applied to non-price restrictions im-
posed by manufacturers in a dual-distributorship context (i.e., some
distribution directly by manufacturer, some by independent distrib-
utors),\textsuperscript{26} and to cases in which a manufacturer reached an agreement
with a new distributor before terminating an existing agreement.\textsuperscript{27}

The Supreme Court also held in \textit{Sylvania} that the distinction
between sale and nonsale transactions is not significant for antitrust
analysis. Restrictions imposed in either type of transaction should
be evaluated under the Rule of Reason.\textsuperscript{28}

These case law developments regarding unilaterally-imposed,
non-price vertical restrictions give computer businesses lacking
market power great flexibility in structuring vertical channels of dis-
tribution. For example, it appears that a microprocessor manufac-
turer which wants to encourage the supply of dealer-provided
services with its products would be able to unilaterally terminate
free-riding dealers selling by mail order.\textsuperscript{29} Also, a franchisor of com-

\textsuperscript{25} See, e.g., Davis-Watkins Co. v. Service Merchandise, 686 F.2d 1190, 1202 (6th
Cir. 1982), \textit{petition for cert. filed sub nom.} Service Merchandise Co. v. Amana Refriger-
ation, Inc., 51 U.S.L.W. 3535 (U.S. Nov. 19, 1982) (No. 82-848); Valley Liquors v.
Renfield Importers, Ltd., 678 F.2d 742, 745 (7th Cir. 1982); Muenster Butane v. Stewart
Co., 651 F.2d 292, 298 (5th Cir. 1981); Ron Tonkin Gran Turismo, Inc. v. Fiat Distrib.,
637 F.2d 1376, 1387 (9th Cir.), \textit{cert. denied}, 454 U.S. 831 (1981); Donald E. Rice Tire Co.

\textsuperscript{26} See, e.g., Davis-Watkins Co. v. Service Merchandise, 686 F.2d 1190, 1201-02 (6th
Cir. 1982), \textit{petition for cert. filed sub nom.} Service Merchandise Co. v. Amana Refriger-
ation, Inc., 51 U.S.L.W. 3535 (U.S. Nov. 19, 1983) (No. 82-848); Krehl v. Baskin-Robbins
Ice Cream Co., 664 F.2d 1348 (9th Cir. 1982); Copy-Data Sys. v. Toshiba Am., 663 F.2d
405 (2d Cir. 1981); Abadir & Co. v. First Miss. Corp., 651 F.2d 422, 426 (5th Cir. 1981).

\textsuperscript{27} See, e.g., Dunn & Mavis, Inc. v. Nu-Car Driveaway, 691 F.2d 241 (6th Cir. 1982);
A.H. Cox & Co. v. Star Mach. Co., 653 F.2d 1302 (9th Cir. 1981); Oreck Corp. v. Whirl-
pool Corp., 579 F.2d 126 (2d Cir. 1978) (en banc); Burdett Sound, Inc. v. Altec Corp.,
515 F.2d 1245 (5th Cir. 1975). Note, though, that vertically imposed, non-price distribu-
tion restrictions are unlawful \textit{per se} if their purpose is price fixing. United States v.
Bausch & Lomb Optical Co., 321 U.S. 707 (1944); JBL Enter. v. Jhirmack Enter., 698
F.2d 1011 (9th Cir. 1983).

\textsuperscript{28} 433 U.S. at 57.

\textsuperscript{29} O.S.C. Corp. v. Apple Computer, Inc., [1983-2] Trade Cas. (CCH) ¶ 65,493
granted Apple's motion for summary judgment despite some evidence of conspiracy
between Apple and its dealers who complained about price erosion resulting from
mail order sales of its products).
puter timesharing businesses (providing the hardware configuration, program library, and manuals) might be able to grant its franchisees the exclusive right to market services within an area of primary responsibility.\textsuperscript{30} As a final illustration, a software developer would be able to limit the customers to whom OEMs can sell systems which incorporate its software.

All such restraints by firms lacking market power can be presumed to have been imposed to promote efficient distribution. If the restraints are successful, they will increase consumer welfare. If they are unsuccessful, manufacturers will observe that sales could be increased through other methods of distribution and will abandon the restraints without any need for the antitrust laws to interfere with or supplement market incentives. In any case, the restraints will not impair consumer welfare.

Two other points should be made about unilaterally-imposed, non-price vertical restrictions. First, the preceding analysis applies as well to restrictions on the use of a product by a manufacturer's customers. For example, a software vendor may wish to restrict the use of a package to specific work by a vendee, rather than having the vendee make the package available on a timesharing basis to outside customers. In effect, the unrestrained customer is a potential distributor. Manufacturers who lack market power and make their products unattractive to customers through restraints on use will be unable to make sales. Unless a restraint on customers promotes efficient distribution or otherwise enhances product attractiveness, a manufacturer lacking market power will abandon it. Such restrictions should be judged under the Rule of Reason.

Second, many contracts for computer software and hardware are formulated as leases, with statements that title is retained by the licensor, annual license fees, and other terms designed to avoid the appearance of a sale. Part of the reason for leasing rather than selling has been the desire to impose restrictions on use and alienation by distributors and consumers without encountering antitrust liability. Before \textit{Sylvania}, the antitrust laws limited post-sale non-price restrictions more than post-lease restrictions.\textsuperscript{31} \textit{Sylvania} indi-

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{30} Response of Carolina, Inc. v. Leasco Response, Inc., 537 F.2d 1307 (5th Cir. 1976). \textit{See also} Calculators Hawaii, Inc. v. Brandt, Inc., [1983-2] Trade Cas. (CCH) ¶ 65,697 (9th Cir. 1983) (exclusive dealing arrangement preventing an office equipment distributor from obtaining one manufacturer's equipment and repair parts was not unlawful refusal to deal); Beltone Electronics Corp., [1979-1983 Transfer Binder] \textit{TRADE REG. REP. (CCH)} ¶ 21,934 (F.T.C. 1982); Steuer, \textit{supra} note 18.
\item \textsuperscript{31} \textit{See, e.g.}, United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1967); United States v. General Elec., 272 U.S. 476 (1926); Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911).
\end{itemize}
\end{footnotesize}
icates that restrictions which are lawful in leases would be lawful in sales, thus ending the consideration of some of the factors influencing the form of a computer transaction.

B. Tie-Ins

Tie-in sales involve a seller conditioning the sale of one (tied) product on the buyer's purchase of a second separate (tying) product.\textsuperscript{32} For example, a hardware vendor may make its mainframes available only to buyers of its peripherals. Tie-in sales can be part of a marketing strategy aimed at dealers (including resellers such as OEMs) or consumers.

Full-line forcing involves a seller preventing a dealer from selling only one or a few of its products.\textsuperscript{33} As such, it is a type of tie-in sale aimed at distributors. For example, a software vendor may set sales quotas for its dealers on a variety of programs and provide that a dealer will be terminated if it fails to meet its quota on any single program.

A manufacturer may use tie-in sales for a variety of reasons which promote consumer welfare.\textsuperscript{34} It may be more economical to produce, distribute, sell, or service certain products jointly rather than individually. Tie-ins can also be used to package products so as to increase their attractiveness to consumers.\textsuperscript{35} In addition, tie-ins may promote a product's reputation when its performance de-


\textsuperscript{34} See R. Posner & F. Easterbrook, supra note 2, at 802-10. In addition to the reasons noted in the text, tie-ins can serve as a pricing tactic. Tying can enable a seller to price discriminate and extract more revenue from a given degree of market power over a product than could be extracted through uniform monopoly pricing over the product alone. For example, a monopolist in central processing units (CPUs) but not in peripherals may require purchasers of its CPUs to buy all their peripherals from it. Suppose that the manufacturer sets the price of its peripherals above the competitive level. If more intense users of CPUs buy more peripherals, this tie-in allows the manufacturer to meter demand intensities and extract revenue accordingly. See IBM Corp. v. United States, 298 U.S. 131 (1936). The effects of such price discrimination on consumer welfare are ambiguous. This reason for tying does not pertain when the tying and tied products are purchased in fixed proportions. Such tie-ins do not allow a firm to obtain a second source of monopoly profits. See Burstein, \textit{A Theory of Full-Line Forcing}, 55 Nw. U.L. Rev. 62 (1960); Bowman, \textit{Tying Arrangements and the Leverage Problem}, 67 Yale L.J. 19 (1957); Lavey & Carlton, \textit{Economic Goals and Remedies of the AT&T Modified Final Judgement}, 71 Geo. L.J. 1497, 1500 (1983).

pends on the quality of complementary products used with it and on the success of their integration.  

On the other hand, tie-ins can be used to increase a firm's market power by excluding competition and erecting a barrier to entry. Tie-ins can reduce the number of independent suppliers of only one of the two products and require a competitor or new entrant to produce both the tied and tying products itself. This harm can arise only if the firm imposing the tie-in possesses market power in the tying product. When there are numerous sources of the tying product, a firm employing a tie-in cannot prevent a firm selling only the tied product at an attractive quality/price combination from succeeding. Similarly, a firm without market power in the tying product cannot use a tie-in to raise prices or lower quality. If the package of the tied and tying products is offered at a competitively inferior quality/price combination, consumers will turn to other sources for the tying and tied products.

The Supreme Court has held that a tie-in is unlawful per se (without close scrutiny of its actual impacts on competition) when three elements are proved: (a) sales of two separate products, with the availability of one conditioned on a buyer's purchase of the other; (b) seller has sufficient economic power in the tying-product market to restrain competition in the tied-product market; and (c) a substantial amount of commerce in the tied-product market is affected. The separate-products criterion is difficult to apply and the amount criterion has a low threshold. As for the market-power criterion, a seller must have the ability to raise prices profitably above the competitive level in the tying-product market. This ability can be evidenced by a high market share or sales of the package at a competitively inferior quality/price combination. Thus, the seller


37. See Merger Guidelines of the Dep't of Justice, supra note 10, at ¶ 4504 (discussion of possible competitive harms arising from a firm's vertical integration).


39. See, e.g., Krehl v. Baskin-Robbins Ice Cream Co., 664 F.2d 1348 (9th Cir. 1982); Principe v. McDonald's Corp., 631 F.2d 303 (4th Cir. 1980), cert. denied, 451 U.S. 970 (1981); Moore v. Jas. H. Matthews & Co., 550 F.2d 1207, 1215 (9th Cir. 1977) ("function of the aggregation" test); Siegel v. Chicken Delight, 448 F.2d 43 (9th Cir. 1971) (separate products exist if they can come from different sellers, even if they must be used together), cert. denied, 405 U.S. 955 (1972).

must have some advantage not shared by its competitors in the tying-product market.\textsuperscript{41}

Several recent tie-ins by computer businesses have been the subject of antitrust litigation; none have been found unlawful. One court held that a firm without market power in the small business computer market could lawfully tie its magnetic ledger cards to its repair service and warranty protection for its computers.\textsuperscript{42} Another court found that a firm without market power in the market of operating systems which run on general-purpose minicomputers and microprocessors lawfully could tie its central processing units to its operating system.\textsuperscript{43} The requisite coercion (forcing the buyer to take the package if it wants the tying product) was lacking when a franchisor of timesharing services and software offered its franchisees a hardware configuration.\textsuperscript{44} Similarly, a court found no coercion when a vendor of both systems engineering services and computer equipment did not threaten to remove its equipment if the customer employed a competing supplier of systems engineering services.\textsuperscript{45}

As with unilaterally-imposed, non-price vertical restrictions, computer businesses lacking market power should enjoy great flexibility under the antitrust laws in packaging their products to

\textsuperscript{41} See, e.g., Spartan Grain & Mill Co. v. Ayers, 581 F.2d 419 (5th Cir. 1978), cert. denied, 444 U.S. 831 (1979).


\textsuperscript{43} In re Data Gen. Corp. Antitrust Litig., 490 F. Supp. 1089 (N.D. Cal. 1980) & 529 F. Supp. 801 (N.D. Cal. 1981). The court's second decision made it clear that defendant also lawfully could tie its memory boards to its CPUs, an allegation discussed but not decided in the first opinion. See also Warner Management Consultants v. Data Gen. Corp., 545 F. Supp. 856 (N.D. Ill. 1982), involving a claim that defendant unlawfully tied its maintenance services and certain peripheral hardware to its central processing units.

\textsuperscript{44} Response of Carolina v. Leasco Response, Inc., 537 F.2d 1307 (5th Cir. 1976). The appellate court did not reach the lower court's finding that the tie-in claim should be rejected on the basis that there was no proof that defendant had market power. See also Universal Business Computing Co. v. Comprehensive Accounting Corp., 539 F. Supp. 1142 (N.D. Ill. 1982) (vendor of minicomputers and software alleged that another vendor illegally tied sale of hardware and software to the accounting, bookkeeping, management consulting, and other services it sold or licensed to its franchisees; court did not reach the merits of the tying claim).

achieve efficiencies and enhance their attractiveness. Such tie-ins, including full-line forcing aimed at distribution efficiencies, do not impair consumer welfare.

C. MONOPOLIZATION AND ATTEMPTED MONOPOLIZATION

Section 2 of the Sherman Act is concerned with a firm's actions which exclude competition and thereby enable it to control prices. Such actions could lead to a decline in consumer welfare. Unlawful monopolization occurs when a firm possessing power in a relevant market willfully engages in exclusionary acts directed at establishing or retaining its monopoly "as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." Unlawful attempted monopolization occurs when a firm which has a specific intent to control prices or to destroy competition, engages in predatory or anticompetitive conduct, and creates a dangerous probability of successful monopolization.

Monopoly power can be proved by evidence of actual control over prices or the actual exclusion of competitors. Typically, monopoly (market) power is inferred from a high share of a relevant market. Most courts also have looked to market power in evaluating the criterion of dangerous probability of success in attempted-monopolization claims. Other courts, notably in the Ninth Circuit, have stated that analysis of market power is helpful but not essential for proof of attempted monopolization. Nevertheless, a small

49. See, e.g., American Tobacco Co. v. United States, 328 U.S. 781 (1946); United States v. Aluminum Co. of Am., 148 F.2d 416 (2d Cir. 1945).
51. See, e.g., Walker Process Equip., Inc. v Food Mach. & Chem. Corp., 382 U.S. 172, 177 (1965) ("without a definition of [the relevant market] there is no way to measure [the defendant's] ability to lessen or destroy competition"); Photovest Corp. v. Fotomat Corp., 606 F.2d 704, 711-12 (7th Cir. 1979), cert. denied, 445 U.S. 917 (1980); Perington Wholesale, Inc. v. Burger King Corp., 631 F.2d 1369, 1376 (10th Cir. 1979); Spectrofuge Corp. v. Beckman Instruments, Inc., 575 F.2d 256, 276 (5th Cir. 1978), cert. denied, 440 U.S. 939 (1979); United States v. Empire Gas Corp., 537 F.2d 296, 305 (8th Cir. 1976), cert. denied, 429 U.S. 1122 (1977); George R. Whitten, Jr., Inc. v. Paddock Pool Bldrs., Inc. 508 F.2d 547, 555 (1st Cir. 1974), cert. denied, 421 U.S. 1004 (1975).
market share tends to negate an inference of attempted monopolization drawn from allegedly predatory or exclusionary conduct.\textsuperscript{52}

Many claims of monopolization or attempted monopolization, including claims against computer businesses, have dealt with conduct not involving the structuring of vertical channels of distribution, such as predatory pricing or predatory innovation.\textsuperscript{53} There have been some claims of monopolization or attempted monopolization involving channels of distribution.

Three types of cases in the Ninth Circuit will be noted. A computer manufacturer entered into exclusive contracts with its suppliers of magnetic ledger cards. After an unsuccessful effort to purchase these cards directly from the suppliers, one of the distributors claimed that the manufacturer monopolized or attempted to monopolize an alleged market for these cards by virtue of the exclusive arrangements. The court rejected the plaintiff's market definition and, therefore, rejected these claims.\textsuperscript{54} Next, an attempted-monopolization claim was filed against a newspaper which replaced independent distributors with its own employees. The court found that the terminations were not in themselves predatory or indicative of an illegal intent.\textsuperscript{55} A third unsuccessful attempted-monopolization claim was filed against an oil company using a dual-distribution system. The company had instituted unequal price and commission changes which favored its directly-delivered operations. The court found that plaintiffs did not prove an attempt to monopolize an alleged market for distribution services and wholesaling of defendant's gasoline because they failed to establish a relevant market in which to assess the impact of the defendant's actions.\textsuperscript{56}

A computer business lacking market power would not be liable

\textsuperscript{52} See, e.g., General Business Sys. v. North Am. Philips Corp., 699 F.2d 965, 976 (9th Cir. 1983); MAP Oil Co. v. Texaco, 691 F.2d 1303, 1308-10 (9th Cir. 1982); William Inglis & Sons Baking Co. v. ITT Baking Co., 668 F.2d 1014, 1027-30 (9th Cir. 1981), cert. denied, 103 S. Ct. 57 (1982).

\textsuperscript{53} See Transamérica Computer Co. v. IBM Corp., 698 F.2d 1377 (9th Cir. 1983), cert. denied, 52 U.S.L.W. 3343 (U.S. Nov. 1, 1983); Memorex Corp. v. IBM Corp., 636 F.2d 1188 (9th Cir. 1980), cert. denied, 452 U.S. 972 (1981); California Computer Prods. v. IBM Corp., 613 F.2d 727 (9th Cir. 1979); Greyhound Computer Corp. v. IBM Corp., 559 F.2d 488 (9th Cir. 1977), cert. denied, 434 U.S. 1040 (1978); Telex Corp. v. IBM Corp., 510 F.2d 894 (10th Cir.), cert. dismissed, 423 U.S. 802 (1975).

\textsuperscript{54} See also Calculators Hawaii, Inc. v. Brandt, Inc., [1983-2] Trade Cas. (CCH) ¶ 65,697, at 69,573 (9th Cir. 1983) (no evidence that exclusive arrangement for office equipment and repair parts was unreasonable).

\textsuperscript{55} Naify v. McClatchy Newspapers, 599 F.2d 335, 337 (9th Cir. 1979). See also Becker v. Egypt News Co., 713 F.2d 363 (6th Cir. 1983); Byars v. Bluff City News Co., 605 F.2d 843 (6th Cir. 1979).

\textsuperscript{56} MAP Oil Co. v. Texaco, 691 F.2d 1303 (9th Cir. 1982).
for monopolization, and it is unlikely that a firm with a small market share would be liable for attempted monopolization. Furthermore, actions which promote efficient distribution should not be condemned under Sherman Act section 2 even when carried out by a firm with market power.\textsuperscript{57} The antitrust laws are not intended to stifle a firm's incentives to expand sales by improving the quality of its product or lowering its cost through a more efficient distribution system.

VI. ANTITRUST VIOLATIONS NOT REQUIRING MARKET POWER

There are categories of antitrust violations affecting the structuring of vertical channels of distribution which do not require the defendant to possess any market power. One such category, price discrimination, reflects a statutory concern about reaching conduct which may impair the viability of a competitor, even if such conduct is by a powerless firm. A second category, vertical price fixing (resale price maintenance), reflects a distinction between price and non-price vertical restrictions which is unsupported by economic theory.\textsuperscript{58} A third category, holding conspiracies and group boycotts unlawful, reflects a presumption that such conduct impairs consumer welfare under almost all circumstances.\textsuperscript{59} This section explores the impact of these areas of antitrust law on structuring vertical channels of distribution for computer businesses.

A. PRICE DISCRIMINATION

A manufacturer generally has no incentive to place some of its distributors at a cost disadvantage in intrabrand competition. Nor does a manufacturer generally have an incentive to earn a lower rate of profit on sales to one distributor than on sales to another. A manufacturer may, however, charge different prices but earn equal rates of profit on sales to different distributors, either because of differences in the costs of serving them, or because of one distributor's demand-stimulating activities which benefit the manufacturer. Impairing a manufacturer's ability to vary its prices among distributors

\textsuperscript{57} See, e.g., California Computer Prods. v. IBM Corp., 613 F.2d 727, 744 (9th Cir. 1979) ("IBM, assuming it was a monopolist, had the right to redesign its products to make them more attractive to buyers — whether by reason of low manufacturing cost and price or improved performance.").

\textsuperscript{58} See references cited supra note 18.

\textsuperscript{59} \textit{Per se} rules are invoked only where economic and judicial experience has shown that certain practices almost invariably have a pernicious effect on competition and lack any redeeming competitive virtue. Continental TV v. GTE Sylvania, 433 U.S. 36, 49-50 (1977); Northern Pac. Ry. v. United States, 356 U.S. 1, 5 (1958).
may decrease both the efficiency of its distribution and consumer welfare. Also, competition for sales to competing distributors can cause manufacturers to charge different prices and earn different rates of profit.\(^{60}\)

The Robinson-Patman Act prohibits a seller from charging buyers different prices for commodities of like grade and quality when such pricing poses a reasonable possibility of substantially impairing competition between the buyers and when the price difference is not justified by cost differences or by meeting a price offered by another seller.\(^{61}\)

Before analyzing the scope and impacts of the Act, one should note that the Act has been widely criticized for causing economic inefficiencies through price rigidity\(^{62}\) and that recent Supreme Court decisions have narrowed liability\(^{63}\) and the availability of damages\(^{64}\) under the Act.

The scope of the Act is limited to sales of commodities; sales of services are not scrutinized by this standard for price discrimination under the federal antitrust laws. Courts have confined application of the Act to tangibles. In a transaction involving both tangibles and intangibles, courts will look to the dominant nature of the transaction.\(^{65}\) If software is treated as an intangible (despite its embodiment on magnetic tape or a chip), a software developer would not be concerned about violating the Robinson-Patman Act when charging different prices to different buyers of a program. Similarly, the

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60. See R. Posner & F. Easterbrook, supra note 2, at 951-54.

61. This discussion only deals with secondary-line price discrimination under the Robinson-Patman Act.


63. Falls City Indus. v. Vanco Beverage, 103 S. Ct. 1282 (1983) (meeting-competition defense not defeated on the theory that it applied only where defendant sets its lower price on a customer-by-customer basis rather than by defendant's use of area-wide pricing).

64. J. Truett Payne Co. v. Chrysler Motors Corp., 451 U.S. 557 (1981) (requiring more detailed proof that the price differential was likely to cause a diversion of customers substantial enough to lessen competition between the favored and disfavored customers), on remand, 670 F.2d 575 (5th Cir.), cert. denied, 103 S. Ct. 212 (1982).

65. See, e.g., Aviation Specialties, Inc. v. United Technologies Corp., 568 F.2d 1186 (5th Cir. 1978) (sale of parts not dominant nature of transaction when adjunct to offering repair service); Freeman v. Chicago Title & Trust Co., 505 F.2d 527 (7th Cir. 1974) (title insurance not tangible product despite some transfer of documents); Tri-State Broadcasting Co. v. United Press Int'l, Inc., 369 F.2d 268 (5th Cir. 1966) (intangible transfer involving right to broadcast news including incidental transfer of tangible news reports).
Robinson-Patman Act would not apply to custom programming, computer consulting, or repair and maintenance services.

The scope of the Act is further limited to sales; it does not cover leases or licensing agreements. While the form of a transaction does not affect the analysis of unilaterally-imposed non-price vertical restrictions, it does affect the analysis of price discrimination. Fees for licenses of computer systems are exempt from the Robinson-Patman Act while prices for purchases are not.

Substantial physical differences between two commodities make them unlike in grade and quality, even if consumers treat them as interchangeable. The prices for sales of them would be exempt from the Act. Mere labeling differences or artificial physical distinctions do not make otherwise identical commodities unlike in grade and quality. A court refused to dismiss a price-discrimination claim alleging sales of new word-processing machines at a lower price than sales of used machines of the same type. However, a manufacturer would not have to justify a price differential between sales of one hardware configuration to one buyer and sales of a substantially different hardware configuration to another buyer.

In pricing, a uniform price to different buyers is not discriminatory even if the costs of selling to the buyers differ. Nor does a uniform pricing formula applicable to all customers yield discriminatory prices as long as the lower price is in fact available to all purchasers. While a volume discount is not available to small purchasers, a hauling allowance formula which treats all purchasers equally and is available equally to all does not constitute price discrimination.

An affirmative defense to proof of a price differential is that the differential is justified by the differences in the costs of manufacture, sale, or delivery resulting from differing methods or quantities sold or delivered. For example, OEM price discounts may be justi-
fied by cost savings to the manufacturer; an OEM may need fewer training manuals and fewer installation and support services than a single-system buyer. Another affirmative defense to price discrimination is that the price reduction to a buyer was made in good faith to meet a lawful and equally low price to that buyer by the seller's competitor. The meeting-competition defense does not have to be supported on a customer-by-customer basis. A discount to all OEMs buying over 100 systems annually could be justified with proof that many of these customers were offered equal or lower prices for a similar system from a competitor.\textsuperscript{72}

Finally, a manufacturer engages in secondary-line price discrimination only when the favored and disfavored buyers are competitors and the price differential poses a reasonable possibility of substantially impairing that competition. The price differential must be substantial enough in its impact on resale prices to divert business from the disfavored to the favored competitor.\textsuperscript{73} To return to the example of microprocessor retailers in Los Angeles, a claim under the Robinson-Patman Act could be supported by evidence that one retailer who received a price discount from a manufacturer drew potential sales of the same manufacturer's product away from another retailer who did not receive a discount. Yet, this customer diversion, or even the loss of the disfavored retailer, caused by the price differential would not impair competition or consumer welfare because of the existence of other retailers and manufacturers.

\section{B. Vertical Price Fixing}

Price fixing, whether horizontal (between competing firms at the same level of distribution) or vertical (between firms in a supplier-buyer relationship), is \textit{per se} unlawful in almost all cases.\textsuperscript{74} An agreement which raises prices above the competitive level causes a loss of consumer welfare. In the absence of market power by the colluding firms, horizontal price fixing cannot increase prices above the competitive level. Yet, there is seldom a gain in economic efficiency from horizontal price fixing. This fact justifies a prohibition

\textsuperscript{72} See, e.g., Falls City Indus. v. Vanco Beverage, 103 S. Ct. 1282 (1983); Standard Oil Co. v. FTC, 340 U.S. 231 (1951).


on almost all such agreements and rescues courts from the burden of assessing actual impact on competition and output in each case.

On the other hand, unilaterally-imposed, vertical price restrictions can be used much like non-price restrictions to limit free riding. When a manufacturer sets minimum resale prices, a free rider cannot attract customers by cutting prices. Dealers then compete in providing services to attract customers. Under some circumstances, resale price maintenance may be a more effective means for a manufacturer to achieve the optimal quality/price combination than non-price restrictions. Given a manufacturer's incentives to achieve efficient distribution, it is erroneous to conclude that unilaterally-imposed and enforced vertical price restrictions almost always have a pernicious effect on competition and consumer welfare. Contrary to their current treatment, they should not be unlawful per se.75

In 1911, the Supreme Court simply assumed that vertical price fixing is equivalent to horizontal price fixing and constitutes an unlawful restraint on alienation.76 In Sylvania, the Court continued to treat them alike and explicitly excluded vertical price restraints from the Rule of Reason analysis dictated for vertical non-price restraints.77 In fact, the Court's like treatment applied to sale and non-sale transactions in Sylvania seems to eliminate the "safe harbor" treatment for resale price maintenance on consignments of goods delivered to agent-retailers established in a 1926 decision.78 The courts have struggled to define the extent to which a manufacturer may set resale prices and secure its dealers' compliance with them.79

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75. See supra note 18.
76. See Dr. Miles Medical Co. v. John D. Park & Sons, 220 U.S. 373, 404-09 (1911).
79. See, e.g., United States v. Colgate & Co., 250 U.S. 300 (1919) (a manufacturer unilaterally may fix a suggested resale price for its product, but not coerce its dealers to adhere to that price); United States v. Parke, Davis & Co., 362 U.S. 29, 42 (1960); Russell Stover Candies v. Federal Trade Commission, 718 F.2d 256 (8th Cir. 1983), rev'd Russell Stover Candies, 3 Trade Reg. Rep. (CCH) ¶ 21,933 (FTC 1982); Filco v. Amana Refrigeration, Inc., 709 F.2d 1257, 1261 (9th Cir. 1983); Spray-Rite Serv. Corp. v. Monsanto Corp., 684 F.2d 1226, 1234 (7th Cir. 1982), cert. granted, 103 S. Ct. 1249 (1983); Carlson Mach. Tools v. American Tool, 678 F.2d 1253 (5th Cir. 1982); Yentsch v. Texaco, 630 F.2d 46 (2d Cir. 1980); Butera v. Sun Oil, 496 F.2d 434 (1st cir. 1974).

Note that in 1975 Congress repealed the federal antitrust exemptions that had al-
A type of resale price maintenance is the setting of maximum retail prices. A manufacturer may set maximum resale prices to limit the ability of a dealer, or a cartel of dealers, with market power to extract supracompetitive profits by charging higher prices. Retail prices which exceed the optimal quality/price combination determined by the manufacturer decrease the efficiency of distribution, the manufacturer's profits, and consumer welfare. The Supreme Court has treated maximum resale price fixing as per se unlawful.80

The law may change in this area soon. Recognizing the usefulness of resale price maintenance in addressing free-riding problems, the Justice Department has stated that the per se approach is harmful to consumer welfare and urged the Court to consider whether all vertical restrictions should be analyzed under the Rule of Reason.81 In 1983, the Court granted certiorari in a case involving this issue.82

Until there is change, a manufacturer should not seek dealer compliance with minimum or maximum resale prices through coercion. Nor should a manufacturer terminate a dealer for failure to comply with suggested resale prices in an effort to fix prices, e.g., by eliminating price cutters. There have been few claims of vertical price fixing brought against computer businesses. One municipal court held that placing a manufacturer's suggested retail price on its electronic calculators does not, in itself, constitute the type of coercion prohibited by the per se rule against vertical price fixing.83

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81. Brief of the United States as Amicus Curiae on Petition for a Writ of Certiorari in Monsanto Co. v. Spray-Rite Serv. Co., Dkt. No. 82-914 (1983); Letter from W. Baxter to Rep. R. McClory, 5 TRADE REG. REP. (CCH) ¶ 50,442 (1982). Baxter, former chief of the Antitrust Division, advocated that "if a supplier adopts a bona fide distribution program that includes nonprice restraints, and if that program is reasonably addressed to distribution problems, the case must be judged under the rule of reason, unless the plaintiff can show—by direct or circumstantial evidence—an explicit agreement on the prices distributors are to charge." 45 ANTITRUST & TRADE REG. REP. 966-67 (Dec. 15, 1983).
82. Spray-Rite Serv. Corp. v. Monsanto Co., 684 F.2d 1226 (7th Cir. 1982), cert. granted, 103 S. Ct. 1249 (1983).
C. CONSPIRACY AND GROUP BOYCOTT

Conspiracies to restrain trade and horizontal group boycotts are usually treated as injurious to consumer welfare, making them per se unlawful under section 1 of the Sherman Act.\textsuperscript{84} Such claims have arisen in the context of structuring vertical channels of distribution in three basic ways.

First, a manufacturer may agree with one or more of its dealers to impose a restriction on or to terminate another dealer. For example, a group of dealers may pressure a manufacturer to force other dealers to cease price discounting or selling to price discounters (transshipping). A refusal to deal resulting from a conspiracy or horizontal group boycott is per se unlawful. To prove that there has been a group boycott, the plaintiff must prove numerosity at the dealer level of a boycotting combination. The circuits are split on whether to establish a conspiracy a plaintiff must show that the manufacturer acted contrary to its own economic interest in terminating one dealer after another dealer's complaints. It is also unclear whether it is per se unlawful for a manufacturer to terminate a dealer after receiving complaints from one or more competing dealers that the first dealer has not complied with the manufacturer's distribution program, but without coercion by the complaining dealers. Such a conspiracy claim was brought against Apple for enforcing a prohibition on mail-order sales of its products after receiving dealer complaints; the claim was rejected on summary judgment.\textsuperscript{85}

Second, a manufacturer may agree with its suppliers that they will not sell to its dealers directly. A recent case involved a claim


\textsuperscript{85} O.S.C. Corp. v. Apple Computer, Inc., [1983-2] Trade Cas. (CCH) ¶ 65,493 (C.D. Cal. 1983), rev'd on reconsideration, CV-81-6132PAR(Gx) (Nov. 28, 1983). \textit{See also} United States v. General Motors, 384 U.S. 127 (1966) (concerted action by three associations of Chevrolet dealers and General Motors to police and enforce location restrictions); Davis-Watkins v. Service Merchandise, 686 F.2d 1190 (6th Cir. 1982) (dealer involvement alone does not make restriction unlawful per se), petition for cert. filed sub nom. Service Merchandise Co. v. Amana Refrigeration, Inc., 51 U.S.L.W. 3535 (U.S. Nov. 19, 1982) (No. 82-848); Spray-Rite Serv. Corp. v. Monsanto, 684 F.2d 1226 (9th Cir. 1982) (group boycott found when manufacturer refused to deal following dealer complaints), cert. granted, 103 S. Ct. 1249 (1983); Products Liab. Ins. Agency v. Crum & Forster Ins., 682 F.2d 600 (7th Cir. 1982) (no group boycott in agreement to replace dealer); Com-Tel v. DuKane Corp., 669 F.2d 404 (6th Cir. 1982) (agreement by three dealers and manufacturer not to deal with a price-cutting dealer was unlawful group boycott); Schwimmer v. Sony Corp. of Am., 677 F.2d 946 (2d Cir. 1982), cert. denied, 103 S. Ct. 382 (1982); Battle v. Lubrizol Corp., 673 F.2d 984 (8th Cir. 1982); Edward J. Sweeney & Sons v. Texaco, 637 F.2d 105 (3rd Cir. 1980), cert. denied, 451 U.S. 911 (1981); Cernuto v. United States Cabinet Corp., 595 F.2d 164 (3rd Cir. 1977).
that exclusive dealing arrangements, between a manufacturer of small business computers and two of its suppliers of magnetic ledger cards, constituted an unlawful refusal by the suppliers to deal directly with one of the manufacturer's dealers. The court rejected the horizontal group boycott allegation since the exclusive agreements were solicited by the manufacturer separately and there was a vertical relationship between each supplier and the manufacturer.\textsuperscript{86}

Third, manufacturers may agree among themselves to establish certain restrictions on their dealers. Suppose that a group of software vendors agreed not to sell to retailers who sell packages supplied by firms that the group has identified as pirates. Despite the possible intent of this agreement to enforce copyright and trade-secret laws, the group boycott would be unlawful \textit{per se}.\textsuperscript{87} The same analysis shows that an agreement among users or among retailers to refuse to buy from a manufacturer, intended to coerce the manufacturer into changing its distribution system or product, would constitute an unlawful group boycott.

VII. CONCLUSION

Computer businesses require antitrust counseling in structuring vertical channels of distribution. With regard to some antitrust claims — involving unilaterally-imposed non-price vertical restrictions, tie-ins, monopolization, and attempted monopolization — a firm without market power may be pleasantly surprised at the flexibility allowed under the antitrust laws for implementing efficient distribution systems. As for other antitrust claims — involving price discrimination, vertical price fixing, conspiracy, and group boycott — a firm must be careful in its distribution practices despite its lack of market power.


\textsuperscript{87} See Fashion Originators' Guild of Am. v. FTC, 312 U.S. 457 (1941). See also Service Merchandise Co. v. The Boyd Corp., [1984-1] Trade Cas. (CCH) ¶ 65,759 (1st Cir. 1983) (unlawful agreement among a manufacturer's authorized distributors who refused to sell to a catalog showroom retail chain).