SOME ECONOMIC PRINCIPLES FOR GUIDING ANTITRUST POLICY TOWARDS JOINT VENTURES

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Introduction

Many firms decide that cohabitation beats marriage or just staying single. They form joint ventures instead of merging, competing with each other, or just doing nothing. And like cohabitation, a joint venture may be a temporary affair or a long-lasting relationship. Some joint ventures are established to accomplish a defined goal, such as development of a standard interface for interactive components, and then disbanded. Others are started to produce and market a new product, such as a new computer chip, and may remain in existence for as long as they are viable in the marketplace.

Joint ventures are by no means a new mode or organization. But joint ventures, along with other forms of "interfirm cooperation," have become much more common in the last quarter century. Although comprehensive data are not available, it appears clear that after the mid-1970s the number of alliances between firms grew rapidly. The number of joint ventures formed annually increased from virtually none in the early 1970s to over 200 in the information technology industry by the early 1990s._ Cross-national joint ventures have also grown strongly. The rate of joint venture formation involving U.S. and foreign firms increased by 27 percent annually between 1985 and 1992._ Indeed, the trend towards joint ventures has prompted one observer to claim that, "looking for allies is as much a part of the 1990s corporate Zeitgeist as achieving total quality."_ The phrases "joint venture" or "strategic alliance" appeared over 600 times in our search of business periodicals published in 1996.

Unlike cohabitation, which became trendy at about the same time, the increased popularity of joint ventures does not result from a lack of commitment. Rather, technological change has created more opportunities for productive cooperation that do not require full merger. For example, the convergence of the cable, telephone, computer, and media businesses has created many opportunities for collaboration between firms in different industries. While some firms have chosen merger (Time with Warner and then with Turner),_ others have chosen joint ventures or strategic alliances (Microsoft and NBC to form MSNBC)._ In addition, increased global competition has led more U.S. companies to form alliances with foreign competitors. American Airlines and British Airways have proposed an alliance,_ and AT&T, Italy's STET/Telecom Italia and Unisource, a pan-European alliance, recently announced agreements to form an alliance._

Like cohabitation, though, joint ventures are sometimes viewed with suspicion or opprobrium. At least since Adam Smith's cynical comment that "[p]eople of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices,"_ students of economics have assumed that when competitors get together they are generally up to no good. That view has influenced the courts and the antitrust authorities. In some cases, joint venture participants are prohibited from engaging in certain business acts that would be quite unremarkable and socially acceptable if performed by participants that had been properly merged.

In this paper, we describe three basic principles that should guide antitrust policy towards joint ventures, apply those principles to various types of joint venture behavior, and consider several recently proposed rules concerning joint ventures in light of those principles. We argue that the economics of joint ventures implies that an antitrust policy should: (1) neither seek to encourage nor to discourage entrepreneurs from choosing the joint venture form over other forms; (2) recognize that joint ventures face different management and coordination problems than single firms and that they must adopt practices to deal with these problems; and (3) prevent joint ventures from circumventing the antitrust laws.

These principles help inform the structured rule-of-reason analysis previously discussed by Schmalensee._ We extend that analysis in this article and focus the application of the rule to joint ventures: (a) joint venture practices that do not harm consumers are presumptively legal; (b) joint venture practices that harm consumers but that do not provide important static or dynamic efficiencies are presumptively illegal; (c) joint venture practices that have anticompetitive and procompetitive effects should be evaluated through a full-blown rule-of-reason analysis. We explain that it is essential that any inquiry begin with an assessment of whether the practice in question imposes significant consumer harm, that it would be unsound policy to require joint venture to show that its actions are efficient in the first instance, and that the party complaining about a particular practice should bear the ultimate burden of proof of showing that the practice, on net, significantly harms consumers.

In applying our principles to this structured rule-of-reason analysis, we show that it is important here, just as in other antitrust contexts, to distinguish between antitrust issues that relate to the operation of a joint venture and those that involve its structure. Operational issues turn on the nature and scope of collective action by a venture's members. Structural issues turn on the identity of those members and the rules, if any, governing changes in membership. While the effect on consumer welfare is the ultimate standard for evaluating all joint venture actions, the distinction between structural and operational rules leads, again, as in other antitrust contexts, to different presumptions for joint venture practices that pass through the market power (Step 1) and efficiency (Step 2) screens into the full-blown rule-of-reason analysis (Step 3). In the case of structural rules, courts or regulators should compel joint ventures to expel or add members only under exceptional circumstances: those in which courts or regulators would break up a single firm in a monopolization case or would force a single firm to share its property because it is an essential facility. In the case of operational rules, finders of fact should temper the application of the standards governing single firms with a recognition of the difficulties of collective decision making in a joint venture. Finders of fact should also recognize that devising workable "less restrictive alternative" modes of operation is problematic for people who are not experienced in the day-to-day complexities of running joint ventures.

The paper has six sections including this introduction. Section II discusses economic aspects of the joint venture form that bear on the proper antitrust treatment of joint ventures. Section III reviews antitrust problems that often arise in practice with joint ventures and then describes our basic principles for treating joint ventures. Section IV discusses our structured rule-of-reason analysis in light of these principles and applies this analysis to selected antitrust issues. Section V evaluates several recent proposals concerning the antitrust treatment of joint ventures. These proposals focus on joint venture decisions to exclude firms from participation. Section VI presents a brief summary of our major findings.

Economic Aspects of Joint Ventures

Firms have relationships with each other all the time. However, these interactions seldom rise to the level of commitment or seriousness of purpose that would define a joint venture. As the name implies, a joint venture emerges when two or more firms join forces to do the sorts of things that single firms do internally. This includes conducting research and development, developing a new product, entering an industry, or securing scale economies through the concentration of production._ Several recent examples illustrate this form of business organization. In 1991, IBM, Apple, and Motorola began work on a jointly developed microprocessor (the "PowerPC" platform) designed to challenge Intel's hegemony in the market for personal computer microprocessors._ New United Motors Manufacturing, Inc. (NUMMI) is the joint venture of General Motors and Toyota Motors. It assembles Corollas and compact pickup trucks for Toyota and Geo Prizms for General Motors in a former GM plant in Fremont, California._ Mondex International, Ltd. was established as a "smart card" joint venture joined by 17 major institutions, among them Dean Witter Discover, AT&T, Wells Fargo, NatWest Bank and the Royal Bank of Canada. Subsequently, MasterCard acquired a 51 percent share of Mondex._

This section has five parts. Part A describes the different types of joint ventures. Part B presents an overview of the changing role of joint ventures in the economy. Part C explains some of the economic advantages of organizing business activities through a joint venture. Part D discusses some of the economic problems faced by joint ventures. And Part E summarizes our discussion of joint ventures.

Types of Joint Ventures

The term joint venture is broad enough to encompass virtually any form of plausibly legitimate collaboration between firms. We focus on horizontal joint ventures. A horizontal joint venture is one that includes members that compete against each other in a relevant market. Often, the joint venture provides inputs that help these firms compete more effectively by lowering costs or increasing the value of the product. These include joint ventures for research and development, production, marketing, information exchange and standard setting.

Joint ventures formed to conduct research and development have received considerable attention. In 1980, the Antitrust Division of the Department of Justice (DOJ) put out guidelines_ specifically to address issues

concerning them. In 1984, Congress passed the National Cooperative Research Act (NCRA)_ to help encourage their formation. Research joint ventures can help facilitate innovation—especially for basic research that can involve substantial spillovers, and such ventures can therefore reduce socially wasteful duplicative efforts. Examples of research and development joint ventures include: Bellcore, formed as a joint venture between the regional Bell operating companies (Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, SBC Communications, and U S WEST);_ the Partnership for a New Generation of Vehicles, an alliance between several government agencies as well as Chrysler, Ford, and GM to develop new vehicle technology,_ and the Microelectronics and Computer Technology Corporation, a basic research venture of microelectronics firms._

Production joint ventures can realize efficiencies by combining firms with complementary skills or other assets or by permitting small firms to overcome scale difficulties. The NCRA had covered only agreements at the basic research and development level,_ thus not including any joint efforts to commercialize and develop products. In 1993, Congress extended the protections of NCRA to production joint ventures by passing the National Cooperative Research and Production Act (NCRPA)._ Visa and MasterCard are production joint ventures comprised of member banks that cooperate to operate payment card networks. The GM-Toyota joint venture is also a production joint venture.

Producers of relatively homogeneous products often form marketing joint ventures to conduct advertising and promotion. Sometimes such producers form trade associations, such as the National Cattlemen's Beef Association, that attempt to increase consumer demand._ There are obvious free-rider problems with these joint ventures. Why would an individual producer want to join if it can already reap the benefits of the joint venture's efforts? It is not surprising then, that many of these ventures are either directly undertaken by local government agencies_ or are funded by government-mandated fees._

Some joint ventures, however, combine marketing, production, and research and development. These joint ventures make particular sense because they enable firms that have strong capabilities in some but not all of these areas to work together. For example, Astra Merck is a joint venture of AB Astra and Merck & Co., Inc. Astra, a Swedish company, had developed several cardiovascular drugs while Merck had strong marketing capabilities in the U.S. Other joint ventures facilitate information exchange._ In some industries, individual firms may have particular difficulty making business decisions based only on their own information. The most obvious example is the insurance industry. Insurance companies can make more accurate assessments of risk when they aggregate more data on past losses._ The Insurance Services Office collects information from independent insurance companies. It provides expectations of risk from particular types of coverage and files suggested rates with state insurance regulators based on these combined data.

Finally, setting standards for products often involves joint activity between firms. Firms can benefit from standard setting, particularly for products that connect to or interact with other products. If an individual firm is sufficiently important, it can perhaps set the standard by itself. But frequently there are advantages from cooperation. For example, three consortia (Zenith/AT&T, Thomson Electronics/Phillips Electronics/Sarnoff Research, and General Instruments/MIT) joined to form what is known as the "Grand Alliance," which is determining the new high definition television standards._ The type of television signal broadcast by stations needs to be compatible with the type of signal that television sets can receive. The Grand Alliance proposed a standard that was recommended by an advisory committee of the Federal Communications Commission (FCC) as the next U.S. broadcasting standard._ This standard was subsequently challenged by the computer and motion picture industries, which were concerned that the standard was in conflict with their respective needs._ Ultimately, the various industries reached a compromise agreement that was then adopted by the FCC._ While it is possible that firms could resolve a standard through the marketplace without direct interaction, agreeing on a standard can increase the probability and speed of consumer acceptance of and demand for a new product and reduce business uncertainty.

Economic Role of Joint Ventures

Research and development, production and marketing joint ventures have come to play an increasingly

important role in our economy. We discuss four broad areas in which these types of horizontal joint ventures have become prominent: high-technology industries, healthcare industries, international business, and network industries.

High-Technology Industries

High-technology industries are one of the most important sources of U.S. economic growth in our society today. The ability of firms in these industries to innovate and remain competitive is critical for the success of our economy. Policymakers recognize that joint ventures are often essential for achieving this innovation. For example, the U.S. Department of Justice, in its Antitrust Guide Concerning Research Joint Ventures, noted that:

> In modern economies, innovation is a key to productivity and competitiveness. Achieving innovation usually requires research, as well as development of new ideas into marketable products, services or technology. . . . For many sensible reasons, such as the large size, scope or risk of a project, or the complementary nature of the cooperating firms, much research is carried out jointly by two or more firms or by an association or joint venture._

The U.S. Congress, in the National Cooperative Research and Production Congressional Statement of Findings and Purpose, found that:

> (1) technological innovation and its profitable commercialization are critical components of the ability of the United States to raise the living standards of Americans and to compete in world markets; [and] (2) cooperative arrangements among nonaffiliated businesses in the private sector are often essential for successful technological innovation . . . ._

As these comments suggest, the joint venture structure is an important vehicle for innovation and the associated development of marketable products. In the biotechnology industry, for example, a substantial amount of the research is conducted by small firms that lack the necessary equity and expertise to develop a commercially viable product._ While some equity financing is available to small biotechnology firms, they often decide to enter into alliances with large corporations such as pharmaceutical firms. Lerner and Merges examined the growth of new interfirm alliances involving U.S. firms in biotechnology, information technology, and advanced materials. They found that the number of such alliances increased from 42 in 1980 to 133 in 1987 to 235 in 1994. _

Some notable examples of joint ventures in high-technology industries include: an agreement between Bristol-Myers Squibb and Progenics Pharmaceuticals to develop and market cancer vaccines;_ the Microelectronics and Computer Technology Corporation, a consortium of technology firms, which includes Control Data Company, Digital Equipment Company, Honeywell and RCA;_ and several alliances which have been formed to develop the next generation of cable boxes, including Time Warner's separate agreements with Toshiba and Scientific-Atlanta._ There are also, of course, general research and development joint ventures.

Healthcare Industry

Joint ventures are also increasingly important in the health industry—an industry that accounted for about 18 percent of personal consumption expenditures in 1995._ This industry has come under considerable scrutiny over the last several years as a result of allegations of inefficient operation and of provision of gold-plated healthcare._ As a result of these concerns, and attendant regulations, the industry has attempted to contain costs through new organizations, some of which involve new forms of collaboration between competitors. For example, hospitals have formed joint ventures involving the use of expensive healthcare equipment or highly specialized healthcare services; healthcare providers have organized joint purchasing arrangements to allow them to realize scale economies; and physicians have formed network joint ventures to implement cost controls and deliver efficient services to patients. These collaborations are generally production joint ventures.

The DOJ and the Federal Trade Commission (FTC) have recognized both the procompetitive potential of many of these joint ventures as well as their potential anticompetitive dangers. They have jointly issued a set of statements regarding the antitrust concerns in the healthcare industry._ These statements provide advice to potential joint ventures by providing specific safe harbors as well as general guidance on what factors are important to the agencies in analyzing the antitrust implications.

Joint ventures in the healthcare industry come in many shapes and sizes, but physician specialty networks are especially common. For example, Yellowstone Physicians, LLC, is a network in the Billings, Montana area that seeks to enter into managed-care provider contracts on behalf of its members. The Eastern Ohio Physicians Organization, Inc. is a similar organization which operates in the Youngstown, Ohio area. Other examples of healthcare joint ventures are the Ohio Ambulance Network, Inc., a network of ambulance and ambulette service providers which seeks to secure contracts with large payers, such as HMOs, and the Central Texas Medical Group, an independent practitioners' association designed to distribute information and educate its members on managed-care and community issues.

International Joint Ventures

International considerations have come to play an important role in the U.S. economy as technological, economic, and political forces have increased world trade. Domestic businesses need to learn from foreign companies, as well as to compete with them. As a result, many international joint ventures have formed recently. Some of these joint ventures are between a U.S. firm that has a product but needs the country-specific knowledge that a foreign partner can provide. Some ventures are between a foreign firm with technological or managerial expertise and a U.S. firm that can facilitate entry into domestic markets. Other ventures are formed between firms from different countries which have complementary expertise that is not related to country-specific reasons. Finally, some joint ventures of U.S. firms are formed to increase their overall ability to compete internationally._

International joint ventures have become more popular as managers have realized the significant challenges of launching new products or opening up new markets in an unfamiliar cultural setting. Many companies now feel that joint ventures and strategic alliances are typically preferable to "going it alone" or using mergers and acquisitions to gain a foothold in a new market, especially when firms are attempting to diversify from their core business._ International joint ventures have become an integral part of the global strategy of nearly every large multinational firm—even longtime isolated and secretive giants like AT&T and IBM have embraced the idea._ Some examples of international joint ventures include CFM International, a joint venture between GE's jet engine subsidiary and Snecma, a France counterpart;_ NUMMI, the GM/Toyota collaboration discussed above; and Astra Merck, also discussed above. These joint ventures sometimes combine elements of marketing, production and research and development.

Network Joint Ventures

Many industries involve technological and business relationships that constitute a network. Most broadly defined, a network is any structure that can be described in terms of nodes and links between these nodes. _ Many network industries share an interesting property: consumers of their outputs benefit the more there are other consumers who also use these products. Your fax machine is more valuable when more businesses have compatible fax machines. The Internet becomes more valuable to you the more people there are to whom you can send e-mail. Your ATM card is more valuable the more places you can use it. These are familiar examples of what economists call "network externalities."

Network industries provide fertile ground for joint ventures because in these industries cooperation among firms is often not only efficient it is often critical. Sometimes, competing firms need to be physically connected to each other to offer valuable services to consumers. That is the case with the telephone companies. In other cases, they need to coordinate their activities. That is the case with flower delivery services. In still other cases, they need to agree on standards. That is the case with computer software and hardware vendors.

These gains from cooperation sometimes result in the partial integration of firms. Thus, FTD is a joint

venture of flower shops that provides a national and international network for the delivery of flowers._ MasterCard is a joint venture of banks that provides a computer network for processing card transactions and a set of rules that encourages banks to sign up merchants and issue cards.

Advantages of Joint Ventures As a Business Organization

As the previous discussion illustrates, businesses form joint ventures because they believe that this business structure provides several advantages over remaining a single firm, and either foregoing the opportunity presented by the venture or attempting to pursue it through merger or growth._ Through collaboration, joint ventures enable firms to reduce free riding by each on the others' efforts in research and development. Joint ventures may also provide a superior vehicle for interfirm transactions than other sorts of contracts. They enable firms to realize synergies between their operations by capitalizing, for example, on each other's comparative advantages in marketing and production. They may also permit firms to realize certain efficiencies from economies of scale and scope or from network economies. Joint ventures enable firms to achieve these benefits without full merger and the inefficiencies that are sometimes associated with the integration of distinct firms. We discuss these advantages in turn.

Appropriability

Firms must generally expect to appropriate a substantial portion of the benefits from their investments to make those investments in the first place. Firms can expect to receive virtually all of the benefits from investments in tangible assets, such as plant and equipment. But firms may have substantial difficulty in capturing the bulk of the returns from innovations generated by their investments in basic research and development. These innovations might be difficult to patent or otherwise protect, and even patented innovations may not result in a marketable product for years. Alternatively, it may be easy for other firms to invent around patented innovations. Companies sometimes try to reverse engineer each other's innovative products and can sometimes create noninfringing alternatives. Similar problems can exist in appropriating the benefits from, for example, marketing efforts of producers of homogeneous products or products in new categories.

In general, the greater the degree of the "spillover" of benefits from an individual firm's investment to other firms, the less incentive any firm has to invest. Consider a simplistic example of a potential research project that would produce a new desirable product with certainty. Suppose, however, that this product can be imitated by competitors who immediately drive the price down to the marginal production cost. No individual firm would have any incentive to develop this product, however great its value to consumers. It is conceivable, though, that the potential firms in the industry could reach an agreement to enter a joint venture that would develop the new product and retain some control over pricing so that the joint venture would have the incentive to fund the research. A joint venture thus helps reduce the appropriability problem, at least among the joint venture members._

Contractual Efficiency

The joint venture form can also help reduce the transactions costs necessary for accomplishing certain business objectives. Beginning with Coase's classic work on the nature of the firm, economists and legal scholars have recognized that the scope of a firm is determined, in part, by the relative advantages of conducting business through informal contracts between factors of production within the firm and employing formal contracts to link distinct factors of production organized as separate firms._ A joint venture provides an organizational form that enables the participants to use both formal and informal contracts for interacting in various dimensions. A joint venture results in an integration between the firms, along at least some business dimensions, that in turn results in informal contracts (e.g., a joint management making decisions) replacing formal contracts (e.g., a contract that dictates the actions taken and compensation received by each firm). Here we discuss the efficiencies of a joint venture compared to the members remaining independent.

To achieve a particular business objective, firms could consider either a joint venture or explicit contracts. Firms that decide to start a joint venture have presumably determined that partial integration through a joint

venture provides more synergies, or provides those synergies at lower transactions costs, than either full integration or explicit contracting._ The fact that some joint ventures have objectives that can be accomplished in a limited duration of time is a further reason why partial integration is preferable to full integration. Once the objective has been achieved, it is far easier to undo a partial integration than a full integration of firms.

In the complex, uncertain, and often long-term business situations that motivate joint venture formation, it is difficult and costly, at least, to write an explicit contract that would adequately anticipate all of the important contingencies. While the joint venture structure is itself far from immune to similar organizational problems,_ it does provide some improvements over independent firms trying to contract to the same result. Monitoring is easier in a joint venture where members have direct access to the venture's activity. Also, opportunism is less likely among members who have investments in a joint undertaking. And finally, the costs of bargaining over ongoing issues is smaller when the parties are more directly in contact with each other._ At the same time, full integration may entail higher transactions costs or result in greater diseconomies than partial integration. It is expensive, time-consuming, and difficult to combine distinct firms with separate cultures and structures. In many business dimensions, making a firm larger or more complex may result in inefficiencies. Partial integration enables firms to focus on the particular business dimensions for which there are net gains. For example, two firms from separate industries that combine to develop a new product or to enter, for them, a new market, might not find it otherwise useful to incur the costs of merger negotiations. The firms might have considerable disagreement on how much each of them is worth, especially if they are not publicly traded. They might have conflicts over how to divide up managerial control in the merged firm, perhaps both wanting more autonomy than is possible.

And, of course, there are the straightforward transactions costs attendant to any merger. If the portions of the firms' businesses that are unrelated to the joint venture would realize no efficiency benefits from merger, there may simply be no reason to incur these various costs. The need for only partial integration in a joint venture provides one other advantage. The member firms might not be permitted to merge because of antitrust concerns over portions of their businesses unrelated to the joint venture, but might receive approval for the joint venture.

Synergies

Joint ventures permit members to realize synergies from combining complementary knowledge or assets through partial integration in a variety of ways. A firm with a good product but minimal marketing skills might enter a venture with a firm that can provide such expertise._ Or, the development of new products might require an array of very different skills; for example, firms with experience in payment systems might enter ventures with firms with computer knowledge to develop a technology for authorizing payments over the Internet. Such synergies provide an especially important motivation for the formation of international joint ventures. A firm will often already have developed a product, but will still need the input of a foreign firm to market it successfully in a foreign country as well as, perhaps, to adapt the product to the needs of consumers there. The term synergy is sometimes used very broadly to describe anything beneficial resulting from cooperative activity. We use it here solely to refer to those situations where assets of firms (tangible or intangible) are of greater value in combination than alone.

Network Externalities

The term network can be used quite broadly to encompass a wide range of structures including airline route systems, credit card systems, a firm's "network" of suppliers, or a businesswoman's "network" of acquaintances. As we noted above, however, network externalities exist only when the value of the network increases more than proportionately when the size of the network, measured appropriately, increases. The prototypical example of network externalities is the telephone network. As the number of telephone subscribers increases, not only is the network's value increased because new customers now have telephone service, but(and this is the externality(the existing customers' service is now more valuable because there are more people they can call.

Just because many structures can be broadly characterized as networks does not necessarily imply that they

exhibit network externalities as economists have defined them._ These network externalities arise specifically on the demand side and are conceptually distinct from production costs issues on the supply side such as scale or scope economies, though they can have similar effects on industry structure._ It is also important to note that just as economies of scale or scope can be exhausted at some level of firm size or output diversity, so too can the magnitude of network externalities decrease as a network increases in size and reach zero at some point. Exhaustion of network externalities can result from congestion (a problem that America On-Line users have recently experienced) or from managerial diseconomies of running large, complex networks. Similarly, where national coverage of a joint venture is valuable, say, perhaps, in fast food franchising, network economies may be exhausted when such coverage is attained. The natural limits on network externalities together with product differentiation explain why multiple networks can survive in the same industry. Examples include payment cards (MasterCard and Visa are joint ventures, and there are also two single firms, American Express and Discover), long-distance telephone (three major carriers(AT&T, MCI, and Sprint(and many smaller ones), microcomputer operating systems (Windows/MS-DOS, OS/2, MacOS), and newswire services (AP, Reuters).

Scale/Scope Economies

For large projects, such as major research and development efforts or building network infrastructure, there can be considerable economies from spreading fixed costs among a greater number of firms, and ultimately consumers. These cost savings to firms can also be efficient in a social sense because they represent gains from a reduction in duplicative activity._ As with network externalities, scale economies can also be exhausted by some point. In addition, some firms will have difficulty attempting large or uncertain investments because of capital constraints or risk aversion. These problems are reduced in a joint venture. Joint venture formation will thus facilitate some endeavors designed to capture scale economies that might not otherwise take place.

Roughly, economies of scope exist when the cost of producing two products within the same organization is less than the total cost of producing the products in separate organizations. Economies of scope can, for example, result from purely technological reasons, such as one good being the by-product of the production of another good, or from efficiencies in the joint marketing of two different goods for which consumers have complementary demands, or from sharing production facilities that would otherwise be underutilized. Scope economies can turn into scope diseconomies as product lines become too broad to manage or market effectively.

Disadvantages of Joint Ventures As a Business Organization

The efficiencies from partial integration do not, however, come easily to joint ventures. They are relatively fragile organizations. One study found that only 50 percent of the alliances between large and small firms in high technology survived four years._ Another estimates that 60 percent of alliances fail._

It is crucial for antitrust analysis to understand the difficulties that joint ventures face as a way to organize business activity, because many of these problems do not exist or are less severe for fully integrated firms. Moreover, the solutions that joint ventures implement to deal with these obstacles are, by the very nature of joint ventures, often rules or regulations that have to be written down and explicitly enforced. To the extent that single firms face similar problems, they resolve them internally and, generally, much less visibly.

There are two general categories of difficulties that joint ventures have as business organizations. We discuss first the incentive-based problems faced by joint ventures—how do firms cooperate when they have different profit goals? It is complicated both to agree on the goals of the joint venture and to solve inherent externality problems; we describe these issues in the first two sections below. But perhaps just as important a problem, and a much less well-understood one (at least for economists and lawyers), is the difficulty of managing a joint venture of firms accustomed to thinking of their partners as rivals—how do fierce competitors learn to cooperate, at least partially?

Divergent Objectives

Even though a collection of firms may recognize that it is in their mutual interest to form a joint venture, they are still independent entities with separate profit motives. Suppose, for example, participants in a research and development joint venture agree that there is the opportunity to develop a new technology, but there are different potential forms of the technology. If the members have different relative profit opportunities depending on which form is developed, or even if they simply disagree about the relative attractiveness of the available alternatives, there could be considerable difficulty in reaching a consensus. More generally, any joint venture is likely to have similar conflict over what goals to pursue.

Even when the joint venture's objectives are easily defined, the partners may still disagree about how to divide their financial contributions and how to apportion the resulting benefits. The answers to these questions depend on the beliefs of all participants regarding the relative and absolute gains for each resulting from the venture. These issues are difficult to resolve because there are likely to be legitimate differences in firms' beliefs as well as the inevitable bargaining among firms. By contrast, these are issues that do not exist for a single firm that has a unified profit objective. The failure of Taligent to live up to its founders' expectations provides a good example of how different objectives and confusion about a venture's "mission" can spell disaster. Taligent's initial goal of developing a fully object-oriented operating system (originally code-named "Pink" at Apple Computer) was scrapped in lieu of developing applications tools for IBM's AIX and OS/2 platforms, among others._ The joint venture ended up laying off roughly half of its employees and was eventually absorbed by IBM. Industry experts blamed much of the problem on differing agendas._,_ One executive dealing with Taligent believed "[i]t continues to be a problem for them that nobody—including those inside Taligent—can decide what Taligent should be."_

Externalities

Joint venture members can take actions that have externalities. That is, they can impose costs and benefits on other members, for example, by increasing or decreasing the value of commonly owned joint venture property. The natural objective for the venture as a whole is to maximize the total value that all members receive, and it will want to impose rules that deter an individual firm from free riding on joint investments of all members for its individual gain. Similarly, the venture will want to provide incentives for individual members to enhance the venture's assets beyond the point at which they individually benefit. Again, these are problems that do not arise to nearly the same extent for a single firm which, in principle, recognizes the effects of business decisions on the firm as a whole._ For example, Visa U.S.A.—a joint venture of banks— recently faced an antitrust action from one of its members which wanted to issue a Visa card that would earn the cardholder points in an American Express rewards program._ Such a card would have allowed American Express to use the Visa brand to build loyalty to its own brand and would have allowed the Visa member to gain from letting American Express free ride on the collective efforts of Visa. Visa was successful in its defense of this case._

To take another example, consider a long-distance moving company joint venture comprised of independent local agents who jointly advertise on a national basis and coordinate reservations and shipments through a central office. Suppose that this venture has developed its reputation through successful advertising and from members providing good service. An opportunistic firm might now decide that it could profit by sacrificing the quality of its product, thereby lowering its costs but, of course, harming the venture's reputation. This firm will suffer some direct loss to its own reputation perhaps, as well as its share of the harm to the venture's reputation, and it will take these factors into account. What this opportunistic firm will not consider, however, is the negative effect of the harm to the venture's reputation on the other joint venture members. Because individual venture members can thus benefit from actions that will harm the venture as a whole, it is therefore in the interest of the members collectively to pass and enforce rules to prevent opportunistic behavior of this sort.

To minimize the effects of free riding, joint ventures can provide incentives for members to increase the value of the joint venture even when they do not individually benefit. They can also impose rules that prohibit or penalize firms from engaging in actions that reduce the value of the joint venture. Using our moving company example, suppose that local firms can receive referrals for jobs in other locations that they do not service. It is in the interest of the venture as a whole to have local firms seek out and pass on these referrals to other member firms. The venture might also impose regulations that require the referral to be

passed only to other member firms and perhaps to provide payments to encourage firms to solicit referrals. Joint ventures generally will attempt to identify sources of positive externalities and create incentives for individual firms to realize them, just as they will take steps to deter actions with negative externalities.

Organizational Problems

In addition to externality problems, joint ventures face a range of unique organizational problems. A joint venture needs to provide for cooperation between firms that are otherwise aggressive competitors. Within the venture, these firms must cede some control over assets that are partly theirs to their rivals. They must find a way to develop some level of trust in each other and to overcome possibly antithetical corporate cultures. In addition, since joint ventures are typically effectively controlled by a small number of parties, the approval of managerial decisions is invariably a more complex process than the typical oversight procedures of a publicly and diversely owned corporation. Joint ventures face internal political problems that do not have exact counterparts in other organizational forms.

These organizational issues are best understood by specialists in organization and management and by joint venture managers, not by outside economists. Nevertheless, it is important for people who engage in antitrust analysis to understand the nature of these problems and to recognize that joint ventures may require some latitude to implement rules and practices that are designed to deal with them. This is not to say that antitrust policy should defer to all claims by a joint venture that its practices are necessary for viability. Rather, the courts and regulators should be careful about substituting their judgments for those made by the people who are intimately involved in running the joint venture in question, especially when the challenged practice is not likely to be an effective exercise of market power.

We now consider generally some of these organizational difficulties, noting that specific joint ventures will often have additional venture-specific concerns. First, by its very nature, a joint venture requires that all parties give up some control over portions of their operations._ This is difficult enough for a firm to do, but especially so if its new partners are its former, or even current, competitors. To interact successfully these firms must come to trust one another, a requirement that one source claims to be the "biggest stumbling block to the success of alliances."_ Frequently, distrust is the more natural response from firms who fear their competitors are seeking to use the venture as a pretext for stealing their trade secrets, client contacts, operating strategy, or other internal firm knowledge. A firm therefore needs to be careful in choosing partners with which it will likely be able to build up a level of trust._ A set of firms that feel they can work together then needs to put an organizational structure in place that can foster trust._

Joint ventures often combine firms with very different corporate cultures, which can engender distrust as well as simply make collaborations less productive because of differences in how problems and acceptable processes and solutions are defined. Clearly, when firms are from different countries, differences in national cultures may well translate into differences in the manner in which firms conduct business._ However, even firms from the same country can have serious culture clashes. For example, the Taligent and Kaleida computer software development joint ventures_ attempted to integrate IBM's conservative corporate culture with Apple's computer hacker mentality. The difficulty of doing this is perhaps one of the reasons for the failure of these ventures. An alliance between the advertising agency Young & Rubicam and the financial services firm PaineWebber failed because the agency's focus on long-term relationships clashed with PaineWebber's emphasis on short-term deal making._

Finally, constructing a decision-making structure for a joint venture is far more complicated than for a unitary firm._ The board of directors, or other ultimate decision-making entity, of a joint venture is comprised of the venture members whose profits are very directly affected by the joint venture management's decisions. Given a need to hold the venture together and to maintain trust, it is extremely unlikely that management can implement any significant strategy that does not benefit all major venture participants in the long run, even if that strategy might be highly profitable for the venture as a whole. The management of a unitary firm, on the other hand, simply has to satisfy its board of directors that its business plan is good for the company in aggregate, even if particular divisions are harmed.

Summary

Joint ventures are a growing force in the economy. Their increased prevalence reflects the emergence of more opportunities better exploited through partial integration of firm operations than through either full integration by merger or growth or, alternatively, use of interfirm, arms' length contracts in which no actual integration of management or production takes place. The important point for what follows is that joint ventures provide many opportunities for achieving efficiencies through partial integration, but that these efficiencies are available from an organizational form that has inherent disadvantages relative to unitary firms. Successful joint ventures must develop management and organizational solutions for minimizing the effects of these problems. These economic aspects of joint ventures should color any portrait of competition by joint ventures.

Antitrust Treatment of Joint Ventures: Three Principles

The antitrust treatment of joint ventures is sometimes tortured. The courts and enforcement agencies not infrequently attempt to apply case law concerning ad hoc agreements among unintegrated competitors to a form of business organization that is usually a vehicle to facilitate innovation and increase competition. Plaintiffs frequently argue that specific, individual joint venture practices or rules are per se violations of the antitrust laws because they amount to agreements among competitors to harmonize behavior or restrict output. Yet the joint venture participants would have faced no antitrust issue if they had merged into a single firm and engaged in the same practices.

In recent years, the courts have become less likely to fall for this damnation through labeling, but evading this trap commonly takes hard judicial work. But one does not have to reach too far into the past to find examples in which the label has made the case._ In Topco,_ the Court ruled that the territorial restriction imposed on the sale of supermarket private label goods by an association of small and medium-sized regional supermarket chains was per se illegal. It reached this conclusion even though Topco was formed to allow those chains the capacity to compete with larger supermarket chains that could efficiently produce private label goods internally. Moreover, the Topco member supermarket chains had only an average market share of 6 percent in their respective regions.

After discussing the major antitrust issues that arise for joint ventures, this section presents three principles that should guide the consideration of these issues.

Competitive Issues Raised by Joint Ventures

As discussed earlier, in this context as generally in antitrust, it is important to distinguish between the structural and operational implications of joint venture practices. Structural issues involve the boundaries of the joint venture and the degree of integration that characterizes it. Joint venture formation, policies for admitting new members, and the nature and scope of the partial integration (the locus of cooperation) involve structural issues. Operational issues turn on the nature and scope of collective action by the members of a joint venture. Pricing and output policies and rules that affect the use of commonly owned joint venture property involve operational issues. We examine competitive issues raised by joint ventures using this familiar dichotomy, recognizing that there is an interplay between the two sets of issues. It is, in fact, a prerequisite of sound economic analysis that individual joint venture acts or practices be viewed in the context of the venture as a whole, not treated as an isolated agreement between actual or potential competitors. We use issues raised by cases to motivate the discussion, but we do not intend to provide a comprehensive review of the case law on joint ventures and horizontal restraints.

Structural Issues

With regard to structure, the courts have focused primarily on whether joint ventures have an anticompetitive structure as a result of being overinclusive—integrating too much of the actual or potential productive capacity of an industry either at the venture's initial formation or over time through liberal admission policies. The concern is heightened for joint ventures that impose restraints on the ability of members to compete individually in terms of price or output. As a joint venture encompasses a larger share of productive capacity and reduces the scope of competition among venture participants (in particular, by setting price or output centrally), it becomes closer to a merger to monopoly. The natural tools to examine

this issue (particularly at the time of a venture's formation) are the same ones used to evaluate mergers, modified to be more permissive toward ventures that do less to restrict competition among their members, all else equal.

Agreements between actual competitors with market power are generally examined closely under the rule-of-reason analysis._ The issue of whether the venture is overinclusive is especially compelling when, in the absence of the joint venture, the member firms are already in the market. If members of a joint venture effectively cease competing with each other along an important dimension in a relevant market, the courts should logically treat the joint venture's formation under the same standards as a merger joining together the firms' activities in that market: will the formation of the joint venture result in a significant increase in price to consumers in the relevant market?_ The permissible scope of a newly formed joint venture should be larger the less competition is eliminated through the formation and the greater the countervailing efficiencies resulting from the formation. For example, the joint venture between General Motors and Toyota was not viewed as anticompetitive in part because the joint venture faces substantial competition from nonparticipants and because the joint venture resulted in a partial integration that focused on a narrow product line.

In many situations, a joint venture is formed precisely to develop or market a new product for which a market does not currently exist. The use of potential competition theories from merger analysis is natural here._ In Penn-Olin,_ for instance, the Court addressed this issue by asking whether the venture members were potential competitors in the same market that the joint venture was formed to enter and whether, if only one firm entered, the other firm would have remained a potential entrant.

A related issue is how the formation of an open joint venture should be viewed. Such a venture stands ready, at least for a time, to accept all applications for membership from some class of firms, whereas closed joint ventures, which are more common, have no provision for admission of firms beyond those that were present at the creation. Consider an open joint venture that poses no issue of overinclusiveness at its formation but might present such an issue if it took in all potential members. The antitrust authorities could consider evaluating the probable anticompetitive effects of the joint venture at the outset, or they could wait to see how the joint venture evolves and intervene only when and if the joint venture actually becomes overinclusive. The preferred approach in practice would depend on how quickly the joint venture is likely to expand, and how confident the antitrust authorities are in their ability to predict long-term market effects at the formation stage. If the expansion is likely to be rapid, early intervention is preferable. If the expansion is likely to be slow, there is no loss in evaluating joint venture expansion just like growth through merger: the antitrust authorities intervene only if and when additional integration results in the acquisition of significant market power.

It is conceivable that joint ventures could have an anticompetitive structure as a result of being underinclusive. For example, suppose most of the firms in an industry form a venture to develop a standard for the next generation product. In doing so, they exclude a potentially significant number of potential entrants from the venture and from access to technical specifications necessary for a firm to develop the new product. This restriction, in and of itself, has the anticompetitive potential of excluding output from the market. In practice, however, claims of anticompetitive denial of access to a joint venture (commonly characterized as a collusive refusal to deal) typically come after the venture has made investments, borne risks, become successful, and set membership rules. There are then many more reasons to believe that the venture has legitimate procompetitive reasons for its rules and any resultant exclusion. Certainly a refusal of an efficiency-enhancing joint venture to admit new members is economically quite distinct from a refusal by a group of unintegrated but colluding competitors to deal with a prospective customer. We discuss this issue in more detail in the section on other horizontal restraints.

Operational Issues

The simplest anticompetitive concern raised by collaboration between competitors is that they will engage in collective behavior that does no more than provide a pretext for fixing prices or output. We start by noting that attempts to use a joint venture as a cover for pure price fixing is per se illegal and should be relatively easy to identify. A cartel by any other name is still a cartel. Aside from such naked restraints,

there remains the anticompetitive concern that joint ventures will unnecessarily restrict price competition or allocate territories or customers among venture members for ostensibly efficiency-enhancing reasons. These restraints, in and of themselves, will in all likelihood have some adverse effect on competition, though the effect will generally be smaller the less inclusive the venture.

As we described above, the Court in Topco applied the per se rule to the territorial restraints imposed by the joint venture._ The majority declined to consider the potential procompetitive reasons for the restraints discussed in Chief Justice Burger's dissent._ Although a number of recent decisions have suggested that joint venture restraints will ordinarily be analyzed under the rule of reason,_ the Court has recently cited Topco favorably for the proposition that territorial restrictions between competitors to minimize competition are per se illegal._

In BMI,_ though the Court recognized that the sale of blanket licenses was price fixing in a literal sense, it declined to apply the per se rule, instead using a rule-of-reason analysis. The Court noted that the blanket license agreement created substantial efficiencies by obviating the need for thousands of negotiations between a licensee wanting to perform compositions and the individual copyright holders. In NCAA,_ the Court recognized that some horizontal restriction would be necessary to provide intercollegiate football as a product and that a rule-of-reason analysis was appropriate. The Court found that the particular practices in question, an NCAA television plan that included price and output restrictions on the televised broadcast of college football, were not necessary for the creation of a new product as in BMI nor did they produce other procompetitive efficiencies.

In both Chicago Bulls I_ and Chicago Bulls II_ the restrictions placed by the National Basketball Association (NBA) on the number of superstation (national cable station) broadcasts sold by individual teams were at issue. In Chicago Bulls I, the NBA argued that these restrictions were needed to prevent free riding by individual teams who were, in essence, selling a product which the entire league had collectively developed. The court dismissed the free-riding argument based on the fact that the NBA could charge teams for such broadcasts._ The court thus did not consider the possibility that it might be more efficient for the NBA to prohibit free riding than to attempt to calculate the cost of each ride. In Chicago Bulls II, the court found that there was the possibility that the NBA would be considered a single firm in the context of its television contract negotiations, thus eliminating liability under Section 1 of the Sherman Act._ The court left the issue for remand but indicated that it would depend on the degree of economic integration of the NBA's member teams with respect to the business practice in question.

Not all joint venture restrictions, however, have been adjudicated under the rule of reason. In Maricopa,_ the Court struck down the maximum price-fixing arrangement of a society of medical practitioners as per se illegal. The Court stated that the "claims of enhanced competition are so unlikely to prove significant in any particular case that we adhere to the rule of law that is justified in the general application."_ It also went on to argue that the efficiency claims of the society could have been achieved in less restrictive ways, although presumably this was not relevant to the decision since the Court considered the case under the per se rule. Three of the seven justices deciding the case dissented,_ arguing the inappropriateness of the per se rule to an economic situation that was relatively unfamiliar to the Court, and argued for consideration of the potential efficiencies of the arrangement.

Information sharing may raise anticompetitive concerns related to pricing/output restrictions. On the one hand, the exchange of information might facilitate collusion. On the other hand, the exchange might appear to be necessary for the otherwise legitimate operation of a joint venture or simply result innocuously from the ongoing contact that management of competing firms have through the joint venture. In Gypsum,_ the Court plainly stated that "we have held that . . . exchanges of information do not constitute a per se violation of the Sherman Act[.]"_ And exchanges of summarized price and cost information in competitive industries are generally permitted, while exchanges of detailed information in oligopolistic industries are viewed less favorably when they are related to price-fixing issues._

It is in theory possible that the closer relationships formed among firms as a result of joint activity could assist them in forming and maintaining a secret collusive arrangement. We must remember, however, that familiarity and trust are also fundamental to successful, procompetitive operation of a joint venture. And

given the considerable number of productive collaborations between firms and the infrequent incidence of secret price-fixing arrangements related thereto, there is little empirical reason to be suspicious of joint ventures as a vehicle for facilitating explicit collusion. In addition, outright instances of collusion are also subject to criminal prosecution that provides an additional disincentive.

Structural and Operational Rules

Joint ventures obviously need rules to operate and to solve the free riding and other organizational problems discussed earlier. Nevertheless, a general anticompetitive concern is that joint ventures can use the collective power of their members to impose rules that profit members and harm competition. These rules may have structural or operational consequences, or both. Thus, for instance, a rule might make membership or continued membership conditional on following a certain operational policy. In such a case, it is often appropriate to analyze both the structural (who is likely excluded, and what are the competitive and efficiency effects?) and operational (how will venture members' behavior likely change, and what are the competitive effects?) aspects of the rule. Similarly, an operational change that has the effect of sharply reducing competition among a joint venture's members might have economic effects indistinguishable from (or at least very closely related to) those of a merger among those members. In this case, it is natural from an economic perspective to use the tools of merger analysis to evaluate the change.
One structural rule that a joint venture could impose on its members is, for example, that they can only sell the joint venture's products and not those of competing enterprises. Just as a single firm might wish its distributors to remain exclusive, a joint venture might choose such a rule to provide incentives for its members to develop and promote its products. As we discussed above, one of the problems faced by joint ventures is a divergence of interests among its members. An exclusive dealing rule helps to unify members' goals. The anticompetitive concern, as with single firms, is that the exclusion of access of other producers to the joint venture members (or distributors) in some way limits those producers' ability to compete.

In Rothery,_ the disputed business practice was a policy of Atlas Van Lines, a long-distance moving company joint venture composed of affiliated agents, to terminate the contract of any agent which did not transfer its independent long-distance operations (as opposed to its Atlas operations) to a separate and distinct company. Judge Bork, writing for the D.C. Circuit Court of Appeals, found persuasive Atlas' argument that this policy was necessary in order to prevent the agent company from using Atlas' equipment, training and reputation to benefit the agent's independent operations. Moreover, there was no evidence that this policy would adversely affect competition in the marketplace. Rothery is important for its recognition that a joint operation often needs to have rules to prevent members from free riding on joint investments.

Joint ventures sometimes impose other horizontal restraints on their members. For example, joint ventures are likely to have operational rules that ensure that consumers receive quality service, or provide for the stability and functioning of the venture. In Indiana Dentists,_ a federation of dentists sought pledges from members not to submit dental X-rays to insurance companies for use in claims evaluations. Rather than invoking per se illegality under a group boycott theory, the Court chose to apply an abbreviated rule-of-reason analysis._ The Court made a questionable finding of market power and ruled against the federation because it found no credible evidence of procompetitive effects.

Joint ventures also pass rules to enable the organization to function and monitor itself efficiently. In Realty Multi-List,_ a group of real estate brokers operated Realty Multi-List (RML), a service through which members shared and disseminated their real estate listings. RML's membership regulations included, among others, a requirement that members be open during "customary hours of business."_ RML argued that this requirement was important to: (1) insure that members would likely be in a position to contribute listings; and (2) be available to conduct negotiations and service the listings they furnish._ The court found, under a rule-of-reason analysis, that while RML might have a need to require that members be active real estate brokers, the requirement of maintaining "customary hours" was too broad and could serve to exclude part-time or small agents who could not fulfill the requirement._

In Northwest Stationers,_ Northwest Wholesale Stationers, a purchasing cooperative, argued that it expelled

a member for failure to notify the cooperative of a change in the member's ownership structure._ The Court declined to apply the per se rule, instead noting that "[w]holesale purchasing cooperatives must establish and enforce reasonable rules in order to function effectively."_ The Court believed that in order to prevail, the expelled member needed to make a showing that the cooperative possessed market power or unique access to a business element necessary for effective competition, and stated that "[t]he act of expulsion from a wholesale cooperative does not necessarily imply anticompetitive animus so as to raise a probability of anticompetitive effect."_ This stress on effects seems critical to sound analysis of the behavior of productive joint ventures.

Guiding Principles

The preceding discussion illustrates the diversity of antitrust issues historically and potentially raised by joint venture practices. We now provide a framework for dealing with these practices. While economists are always tempted to come up with a universal theorem, and lawyers an absolutely clear rule, we have not found any policy prescription that deserves either appellation. Instead, we advance and elaborate three principles, rooted in economic analysis, that could guide sound antitrust analysis of joint ventures under the structured rule-of-reason analysis previously described by Schmalensee._ We discuss these principles below.

Joint Ventures Should Not Be Placed At a Competitive Disadvantage Relative To Integrated Firms

Our first principle is that antitrust policy should not bias the selection of a form of business organization by entrepreneurs and investors. They should have the proper incentives to choose the most efficient organizational form, whether that is a single firm that expands through internal growth, the combination of firms through merger, an open joint venture, a closed joint venture, or some other form. Joint ventures should not be favored or disfavored per se. Policy should favor ventures (and venture behavior) likely to benefit consumers and disfavor those likely to have the opposite effect. This principle is especially important because, as we discussed earlier, joint ventures (and joint venture policies) are heterogeneous in effect, at least in principle, and the joint venture form is fragile to begin with.

As a matter of economics, there would be a general case for handicapping the joint venture form across the board only if, on average, discouraging joint ventures of all sorts would clearly make consumers better off than the alternative policy of evaluating the structure and operations of joint ventures with the same standards used to evaluate unitary firms. We are unaware of any evidence that, as a general matter, joint ventures are more likely to result in net consumer harm than alternative forms of enterprise organization. Many joint ventures clearly have no anticompetitive effects, and most joint ventures appear to be efficiency-enhancing integrations. Many joint ventures are formed to effect market entry or to develop new goods and services, and in at least some of these cases discouraging the joint venture form would be tantamount to discouraging entry and innovation. While it is difficult for us to see why this principle should be controversial, the discussion below will reveal that it is violated by a number of proposed policies toward joint ventures.

An immediate corollary of this principle is that antitrust policy should not place existing joint ventures at a competitive disadvantage relative to integrated firms, unless there is a reason to believe that the joint venture form is merely a means for evading the antitrust laws. It then follows that, as elsewhere in antitrust policy, the first step in any inquiry that does not involve a naked restraint of trade (and almost no policies pursued in connection with a productive joint venture can be so characterized without analysis) must be to analyze competitive effects. A merger that does not pose competitive risks does not require an efficiency defense; neither does a small unitary firm's choice of price policy or product line. Antitrust policy that places joint ventures at a competitive disadvantage would artificially reduce the incentives of entrepreneurs and investors to choose this organizational form in the first place. We describe below the disincentives for joint activity that likely resulted from the Sealy_ and Topco decisions.

We begin by explaining the importance of ex ante incentives, then discuss some economic considerations in the choice of organizational form, and finally explore the effects of antitrust policy on the choice of organizational form.

Incentives for Investment and Innovation

It is very easy to underestimate the risks faced by entrepreneurs in the creation of new products and industries. We all tend to forget that matters that now appear obvious were hardly evident at the time decisions had to be made and money had to be put on the table. When we evaluate a successful industry, we tend to forget the failures, bankrupt entrepreneurs and stillborn industries that dot economic history. We marvel at winners such as Microsoft in computer software, MCI in long-distance telecommunications and the Ford Taurus in auto sales. But we quickly forget the losers like VisiCalc that had the first spreadsheet software, Datran that lost more than $200 million in an unsuccessful long-distance telephone venture, and Ford that had high hopes for the Edsel as well as the Taurus. In fact, the odds of commercial success are generally long, especially for highly innovative enterprises. Failure rates for startup businesses—whether they are single firms or joint ventures—are substantial._

Investors and entrepreneurs have to expect substantial payoffs from the win to justify placing bets against these odds. Generally, public policy recognizes that businesses should be able to charge high prices and realize ex post supracompetitive rates of returns_ because these prices and returns are necessary to induce investment and innovation in the first instance. Intellectual property laws protect property rights in patents, trademarks and copyrights, and help inventors earn high returns on this property._ Strong intellectual property laws have helped U.S. companies achieve a high rate of innovation and technical progress._
As with all laws and regulations, the antitrust laws have feedback effects on the long-run incentives to invest and innovate. These laws impose, in effect, a heightened level of scrutiny on the business practices of firms that, through their success, have acquired market power._ While this heightened level of scrutiny is a potential tax on success, it seems generally accepted that this tax, at its current level, is well worth paying to prevent welfare-reducing anticompetitive behavior. As with all taxes, however, we would like to reduce the distortionary effect of the “antitrust tax” on efficient economic behavior. In applying the antitrust laws, it is important to consider not only the short-run effects on consumer welfare of condemning certain practices but also the long-run effects on consumer welfare resulting from the preservation of incentives to invest and innovate—what Areeda has referred to as the need to consider the general “macro level” implications of antitrust policy._

Choice of Organizational Form

Given the risks inherent in any new venture, we would expect that entrepreneurs would consider the ability of alternative organizational forms to enable them to maximize their returns from their investment and innovation. Therefore, the antitrust treatment of joint ventures relative to other alternative forms of organization could affect entrepreneurial choices of organizational form. In evaluating any antitrust rule towards joint ventures, we need to ask how the ex post implementation of that rule will affect the ex ante incentives of entrepreneurs to choose the joint venture organizational form and whether those ex ante incentives will increase long-run consumer welfare.

As we mentioned earlier, joint ventures are not robust organizations compared to single firms. Multiple ownership leads to political decision making which can produce suboptimal investment decisions._
Without effective rules, joint venture participants can impose negative externalities on each other and can free ride on the efforts of other participants. Principle-agent problems are more severe than in single firms. The vehicle itself is more fragile: changes in the business interests of joint venture partners can suddenly end alliances and reduce the returns of one or both members, possibly compromising long-term strategic objectives as well._

Given these problems, it is a wonder that any business would want to participate in a joint venture. Businesses do so because under some conditions, for some sets of firms, the joint venture form provides sufficient advantages over alternative forms of organization. As we discussed earlier, joint ventures can help participants realize network economies as well as traditional scale and scope economies that would not be available to a single firm. At the same time, joint ventures may avoid diseconomies of scale and scope that would arise from full merger of large corporations with operations in many industries.

The Effect of Ex Post Interventions on Ex Ante Incentives

The judicial treatment of particular joint venture actions under the antitrust laws has a feedback effect on the formation of joint ventures in the first place. To the extent that the courts condemn certain types of joint venture practices, the expected cost to actual or prospective joint ventures of adopting those practices—or practices that could be construed as similar—would increase. Furthermore, to the extent that such practices help joint ventures achieve certain efficiencies, the value of the joint venture form of organization would decline relative to alternative forms of organization. At the margin, entrepreneurs would either choose not to pursue certain endeavors for which joint ventures are the only organizational form that provides the return necessary for the investment and risks borne by the entrepreneur, or they would choose an alternative approach.

The Topco and Sealy cases provide a good example of this feedback effect. The horizontal restrictions at issue in both cases included territorial restrictions on competition among members. The efficiency justification for those restrictions was that they provided incentives for members to promote their products by assuring members of most of the benefits of their local marketing efforts. As mentioned above, the territorial restrictions were struck down as per se violations by the Supreme Court. In the aftermath, a Final Judgment_ was entered in the Topco case which stated that there were no explicit prohibitions against the assignment of "territories of primary responsibility" or methods for compensating members for goodwill created in those territories.

There is, of course, no assurance that the practices permitted by the courts would have allowed these types of ventures to solve their incentive problems as efficiently as with exclusive territories. Sealy did, in fact, implement both primary territories and a compensation scheme for promotional efforts. It later found itself liable in a different case, however, for over $10 million in trebled antitrust damages._ And while the Final Judgment in Topco certainly included a warning that such practices were not exempt from antitrust scrutiny, the long-run implications of these cases clearly made it difficult for these types of joint ventures to function effectively.

Joint Ventures Should Be Given Latitude to Deal with Inherent Management Problems

Our second principle is that antitrust policy should recognize that joint ventures face different organizational and management problems than single firms and will therefore adopt various rules and policies to deal with these problems. These solutions may result in the exclusion of firms, the expulsion of members, and various kinds of interfirm coordination. Moreover, even though some organizational and management problems that joint ventures face are similar to those of single firms, joint ventures' responses to these problems may appear different even though they are not. The solutions may appear to be different simply because the joint venture form requires explicit adoption of a rule or policy, while a single firm can handle the problems involved without visible effort. For example, a payment system operated by a joint venture of banks needs to determine the settlement terms for transactions in which the merchant's (acquirer's) and consumer's (issuer's) banks are different. In order to eliminate hundreds of thousands of costly individual negotiations over the settlement terms (including interchange fees) of those transactions,_ the system needs to set those terms centrally. In a payment system owned by a single firm, on the other hand, an interchange payment would correspond to some sort of internal transfer, and the firm knows that every transaction will be settled because it controls both ends of the transaction. Under these conditions, there is no particular reason to expect to see any arrangement corresponding to the joint venture's interchange fee.

We reiterate here the main types of organizational problems encountered by joint ventures. But it is important to recognize that the actual issues facing any joint venture are often particular to its circumstances and depend on the industry in question, the joint venture's goals, the joint venture's structure, the personal dynamics of the venture members, and many other factors. We should therefore be careful about questioning whether particular practices chosen by joint ventures are necessary or reasonably necessary. It is sometimes too easy for outsiders to hypothesize about alternative, less anticompetitive means of solving a particular organizational or incentive problem. It is a quite different matter to actually show that a hypothetical solution that may sound good in theory will work well in practice. Actual joint venture practices, on the other hand, have the appeal of having been designed by the people who actually run businesses, as well as having generally proven their effectiveness in the real world.

Organizational Cohesiveness

As we discussed above in explaining the disadvantages of joint ventures as business organizations, it is simply very difficult for competitors to work together. We would expect joint venture members to be careful in choosing partners with which they are likely to be able to develop an effective relationship. Firms that currently distrust each other will find it very difficult to develop a level of trust. Joint venture members will also want to consider whether the business benefits brought by prospective members outweigh the costs that they impose on the other members. For all of these reasons, joint ventures need to exercise caution in their membership decisions and, accordingly, courts should keep these concerns in mind.

Negative Externalities

A firm in a joint venture is interested only in maximizing its individual profits. If it is not constrained from increasing its own profits at the expense of other venture members, it will generally do so. This type of opportunistic behavior is clearly detrimental to the success of the venture as a whole. In Rothery,_ for example, the joint venture imposed rules to prevent members from using the joint venture's property to benefit individual members' independent operations. Generally, a joint venture that encounters, or is likely to encounter, these problems will consider rules or procedures that limit opportunism and allow the joint venture to function effectively. While these rules are horizontal restrictions on members' competitive behavior, in the context of a productive joint venture, they can have strongly procompetitive effects. In addition, all else equal, venture members will also attempt to choose members who are less likely to create these problems, either currently or in the future.

Positive Externalities

A joint venture also needs to encourage member actions that result in positive externalities for the venture as a whole. Since a member firm cares only about its own success, it will not have the appropriate incentives to undertake investments where the benefits flow predominately to other firms, either because of network externality effects or because the benefits are not sufficiently appropriable. In Sealy,_ for example, one of the efficiency justifications for the imposition of exclusive territories was to provide incentives for the local mattress manufacturers to promote the product in their own regions. Allowing multiple firms to sell the Sealy mattresses in the same region would diminish the incentives of any individual firm to actively promote Sealy mattresses since many of the benefits would flow to the other firms. A joint venture, therefore, will attempt to provide rewards for individual members' actions that benefit the entire venture or to limit the appropriation of an individual member's investments.

Coordination

The joint venture structure is inherently a more cumbersome form of organization than a single firm. Decision making is more complicated because the ultimate authority rests with member firms which have very distinct and potentially divergent interests. Joint venture policies, therefore, particularly those that rise to the strategic level, are inherently less flexible than those of unitary firms. Moreover, when there is the need for interactions among member firms, as in payment card systems or in administration and funding of an ongoing research venture, mechanisms and rules will be needed to structure those interactions that will generally have no counterparts within single firms. The implication is not that we should pity joint ventures, but rather that we should understand that they will need to find business solutions to their particular problems, and that joint ventures will necessarily operate differently from single firms that do not face these problems or that solve them internally.

Joint Ventures Should Not Provide a Vehicle for Circumventing Antitrust Policy Towards Single Firms and Groups of Competitors

Our third principle is that joint ventures should not provide an organizational ruse for evading the antitrust laws: antitrust policy should not ignore anticompetitive problems posed by particular joint ventures. Joint ventures provide an institution through which competitors meet and agree on matters of mutual interest.

Like trade associations and meetings in smoky hotel rooms, a joint venture can provide a vehicle for consumer harm. Antitrust laws should prevent joint ventures from engaging in anticompetitive activity that would have been prohibited if the entrepreneurs and investors in the joint venture had chosen some other organizational form. The less competition remains between venture members, the more danger posed by overinclusive membership. Conversely, the more inclusive a joint venture's membership, the greater the potential consumer harm from rules or policies that limit intra-venture competition.

Merger to Monopoly

Consider the case in which there is an industry consisting of a number of competing firms. A merger of some subset of those firms would not be permitted under the antitrust laws if the merged entity could raise prices or reduce output significantly and if there are no offsetting efficiency benefits._ To take an extreme case, where the sole purpose of a merger would be to raise prices and stifle competition, we would clearly not allow the same set of firms to achieve the same result through a closely integrated joint venture. Consider the following example. Cable television systems often have local exclusive franchises. Suppose that all cable system owners formed a joint venture cooperative to purchase and provide programming services to their systems. This joint venture would have some market power (i.e., some monopsony power) in the market for television programming even though the joint venture members do not compete with each other. If the gain in market power were sufficiently significant(a determination that depends on the relevant market and the importance of cable programming within that market, we would probably condemn a merger of these cable television stations for that reason, and we would not allow these stations to achieve the same result through a joint venture.

Nonetheless, there are differences between a joint venture of firms and a merger of the same firms that the antitrust inquiry should consider. First, the joint venture may provide different efficiencies than a merger. At one extreme, if the joint venture partners do not consolidate production facilities, they may not realize some economies that a true merger would. At the other extreme, the joint venture partners may realize network economies from joint production without being saddled with diseconomies resulting from merging unrelated operations. Second, the joint venture may adopt rules that reduce, or eliminate the possibility of, increases in price or reductions in output. The joint venture may engage in joint production without necessarily engaging in joint pricing, for instance. In that case, the efficiency benefits should be determinative.

Price Fixing

We would also quickly condemn a joint venture that was formed primarily for the purpose of fixing prices. Unfortunately, it is somewhat more difficult as an economic matter to be certain that condemning a productive joint venture for price fixing serves consumers' interests than it is to applaud condemnation of price fixing by a group of wholly separate firms. Joint ventures may fix prices for the same reasons that single firms fix prices—to make as much money as possible. They may also fix prices because collective price determination is necessary for the joint venture to provide a useful good or service._ Or, a joint venture attempting to create a new market, or survive in a declining market, may simply not be viable unless it makes as much money as possible.

To analyze price fixing by a joint venture it is therefore necessary to take several factors into account. Certain joint ventures should not be allowed to form unless the participants agree not to fix prices. For example, there are situations in which the antitrust authorities properly would not allow a merger of the joint venture partners for the purpose of producing the joint venture product because the merger would consolidate too much existing or potential capacity. However, they may permit the joint venture to form to realize certain efficiencies, but only under the stipulation that the joint venture partners sell the joint venture product separately and compete on price and other dimensions. In this case, price fixing is prohibited at the beginning of the joint venture and, absent a change in circumstances, that prohibition should continue.

Consider now the formation of a joint venture to develop and produce a new product. The joint venture is formed at an early stage in the evolution of the industry and will potentially compete with other joint ventures and single firms. Under these conditions, in the absence of entry barriers that would

appreciably limit later competition, there is no economic basis for blocking the formation of the joint venture or imposing any constraints on its decision making. The joint venture partners should be able, for instance, to decide freely between having the joint venture sell the product at a price determined by the joint venture (a choice that would not be viewed as price fixing), or having each joint venture partner sell the product at a price determined by the joint venture (a choice that could be viewed as price fixing).

The problem gets somewhat more complicated if the joint venture grows and changes its rules on price fixing after it has become big. If a joint venture has been allowed to grow big, in part, because its members do not fix prices, then a subsequent decision to fix prices should trigger an inquiry. Generally, we would view price fixing in these circumstances as a naked restraint on trade that should be condemned. However, there may be circumstances under which changes in industry conditions require price fixing for the continued survival of the joint venture.

Essential Facilities

One can also imagine extreme circumstances in which firms form a joint venture to develop or purchase an input that is essential for competitors in the output market. For example, suppose that in 1935 all major U.S. airlines had formed a joint venture that developed and operated airports in all major cities. Suppose that the states had agreed not to allow any other airports to be built within a 100-mile radius of any of the joint venture's airports. This venture would then control all of the landing slots at all major airports. Through its control of landing slots, it could prevent any other airlines from providing service to any major U.S. city. That would effectively block further entry into the airline industry. We would certainly condemn at least the "no competing airport" clause of this joint venture—unless this clause was essential to induce the risky investment in airports—and we might require the joint venture members to make landing slots available to competing, non-member airlines.

One can also imagine other circumstances in which a joint venture has created a very important input as a result of risky investment. To take our airline example, consider the following scenario. There is little investment in airport capacity because no one airline can undertake the risky investment, because entrepreneurs outside the airline industry do not believe that this investment would pay off, and because local governments do not see the future in air travel either. The airlines realize that the only way to start the industry is to collaborate on the development of the necessary infrastructure. While they are willing to undertake the risks because of their beliefs in the future of air travel, they must be able to capture the entire fruits of their success through their monopoly ownership of landing slots. If this could be established, we should be quite reluctant after the industry had developed to force the airlines to make their landing slots available to airlines that had not invested in the venture.

Antitrust Treatment of Joint Ventures: Rule-of-Reason Analysis

The previous section has argued that the antitrust treatment of joint ventures should consider three major principles that we summarize here for convenience:

As a general matter, antitrust policy should neither encourage nor discourage firms from choosing the joint venture form of organization over other forms. Therefore, antitrust policy should not artificially place joint ventures at a competitive disadvantage relative to other organizational forms, since that would discourage entrepreneurs from choosing this form in the first place.

Antitrust policy should recognize that joint ventures face different management and coordination problems than other organizational forms and must engage in various business practices to deal with those problems. Many of these practices necessarily involve interfirm coordination and restrictions on members' conduct. Antitrust policy should prevent a joint venture at the formation stage and during its operation from being used to circumvent antitrust laws that would have prevented equally or more efficient forms of organization from raising price or restricting output.

In this section, we apply these principles to the structured rule-of-reason analysis put forward in earlier work by Schmalensee and focus that analysis on rules adopted by joint ventures._ In sketching the result, it

is important to make a distinction between structural and operational rules, just as the antitrust law deals differently with structural problems and behavioral transgressions.

Does the structural or operational rule raise price or reduce output or otherwise harm consumers significantly? If no, it is legal, because regardless of intent or efficiencies it can do no harm. Note that a "rule" in this context could be the list of a venture's original participants, the set of products with which it is concerned, its rules (or lack thereof) for admitting new members, its policy of collective determination of price or advertising budgets, or essentially the result of any collective decision. If yes, we move to Step 2. The complainer—the antitrust authorities or a private plaintiff—should bear the burden of proof of showing adverse market effects.

Does the structural or operational rule contribute to the production of important static or dynamic economies that could not readily be achieved by an obvious practical alternative arrangement that does not pose the risk of significant consumer harm? If no, it is illegal, since it has no countervailing benefits to offset the consumer harm identified in Step 1. If yes, we move to Step 3. The joint venture should bear the burden of establishing a plausible efficiency justification and the complainer should bear the burden of showing that this efficiency justification is pretextual.

Having reached this step, the finder of fact must balance anticompetitive costs against economic benefits, as both have, by hypothesis, been detected. To avoid arbitrarily favoring or penalizing the joint venture form, this analysis should be informed by the legal standards that affect single-firm conduct:
In the case of structural issues, joint ventures should be compelled to expel or add members only under exceptional circumstances, corresponding to the circumstances under which a single firm would be broken up in a monopolization case or treated as an essential facility and forced to share its property.

In the case of operational issues, application of the standards governing single firms must be tempered by a recognition of the difficulties of collective decision making in a joint venture and of the even greater difficulties those not experienced in the business encounter when trying to devise workable, "less restrictive alternative" modes of operation.

The complainer should bear the ultimate burden of showing that there is consumer harm and that the countervailing efficiencies shown by the joint venture do not outweigh this consumer harm.

The remainder of this section has four parts. Part A describes the framework of our rule-of-reason analysis in more detail. Part B explains its implementation of specific components of the analysis. Part C discusses the safe harbors that result from analysis. And Part D applies our rule-of-reason analysis to particular examples.

Introduction

The rule-of-reason analysis outlined above incorporates two screens: one for consumer harm and the other for efficiencies. These screens economize on judicial resources, reduce the uncertainty of outcomes, and reduce the uncertainty that firms face in doing business._ The first screen is whether the practice has any plausible anticompetitive effect—is there any reason to believe that consumers are harmed as a result of higher prices, lower output, poor quality, or less innovation? If the answer to that question is no, the investigation should go no further. This screen may seem entirely conventional. But it is important in joint venture analysis because there is still a temptation in some quarters to treat various joint venture practices as horizontal restraints of trade that are per se illegal, ignoring the key fact that those practices are often merely parts of the web of agreements that constitute an efficient enterprise and, thus, cannot sensibly be analyzed in isolation.

In fact, Step 1 of our analysis provides an absolute safe harbor for certain joint venture rules: (a) the formation or expansion of any productive joint venture, regardless of the extent to which it would limit intra-venture competition, that would consist of firms that would be permitted to merge into a single firm is legal; and (b) any joint venture operational rule or practice that does not have significant anticompetitive consequences (collusive or exclusionary) is legal. Note that a joint venture consisting of firms that could

not legally merge might nonetheless be allowed to form under our rule if the scope of its integration were sufficiently limited. Thus, for instance, the leading U.S. auto companies have been encouraged to coordinate some of their research and development activity under the Partnership for a New Generation of Vehicles, even though a merger uniting them would not likely pass legal muster. There is symmetry here: under (b), any rule or policy adopted by a joint venture, the members of which could legally merge, would be legal in the absence of important exclusionary effects(of the sort that would be challenged under Section 2 of the Sherman Act if engaged in by the hypothetical merged firm.

There are two basic, related reasons for beginning with effects rather than with efficiencies. First, this sequence is followed in all applications of antitrust policy to single firms or groups of firms. A merger will survive challenge if it can be shown to pose no risk of raising prices to consumers: efficiencies need not be demonstrated unless potential harm is found._ Similarly, even a firm that can be characterized as dominant in some market need do no more to avoid a verdict of monopolization than to show its conduct had no adverse market effects. The only reason to proceed in a different order to evaluate joint venture conduct would be a desire to burden all such enterprises across the board by raising their litigation costs and legal risks. As noted above, we simply do not believe that such broad antipathy has any basis in economic theory or empirical experience.

Second, the reason why antitrust policy generally begins with effects rather than with efficiencies is simple: we have well-established methods for analyzing competitive effects of mergers and of business practices in a range of industries, while evaluation of efficiencies tends to be more difficult and to require more industry-specific expertise. The discussion above implies that this asymmetry is, if anything, more pronounced in cases involving joint ventures. It is very simple to come up with examples of innocent collective actions for which it would be impossible to prove efficiencies rigorously: consider picking a logo or deciding how frequently members' trucks must be painted. If joint ventures are not to be arbitrarily disadvantaged in the marketplace, decisions of this sort must be immune from potentially costly and distracting legal challenge. Single firms are seldom, if ever, required to justify their business decisions unless and until those decisions have been found to impose significant consumer harm.

The reason for imposing the primary burden of proof on the complainer has similar rationales. It is difficult for outsiders to understand why businesses engage in particular practices. Imposing the primary burden of proof on businesses, particularly joint ventures, to justify their actions in efficiency terms would subject them to considerable uncertainty over business practices, especially novel ones, and would result in many efficient practices being unjustly condemned. Again, this problem is, if anything, more serious for joint ventures than for unitary firms.

The second screen in the rule outlined above is whether a challenged practice for which anticompetitive effects have been found has any efficiency benefits that could potentially outweigh those effects. If the answer is no, the practice should clearly be condemned.

Analysis at this stage, as at the first stage, should be informed by economic principles and empirical findings, as well as by antitrust experience. Thus, in particular, certain joint venture practices should be condemned absent a compelling efficiency defense from the joint venture. Economic theory predicts, and experience confirms, that price-fixing or market-division agreements between unintegrated firms will generally harm consumers particularly in the short run. This clearly justifies antipathy toward these and related practices, but, in the context of a joint venture that, as a whole, is a productive integration of its participants, we do not believe it should rule out an examination of efficiencies. The only justification for practices that would be per se illegal if engaged in by a group of unintegrated firms would be either that they are necessary for the joint venture's product to be produced or for the venture to remain viable in the face of adverse marketplace changes. Thus, if competitors formed a joint venture and fixed the price of a product that these competitors were previously selling independently, we would have little trouble reaching a quick condemnation. Likewise, if a joint venture became dominant in an industry and had not fixed prices, we would quickly condemn its decision to begin doing so absent a particularly compelling justification from the joint venture. If the joint venture agreed to adopt common prices at its inception and if we would have allowed a merger of the joint venture partners, however, the policy would be declared legal by our first (market effects) screen. If a small joint venture began assigning customers to individual

member participants, to take another example, we would be inclined to condemn the practice unless a merger of the venture members would pass a failing firm test._

On the other hand, our analysis would lead to at least a protected cove, if not a true safe harbor, for a joint venture that refuses to admit new members. Forcing a joint venture to admit a member is tantamount to forcing it to share its property with other firms, and unitary firms are required to share their property only in the very rare circumstances when they are found to own "essential facilities." _ Property rights are fundamental to economic incentives. Degrading the property rights of joint ventures would reduce the incentives of joint ventures to form in the first place. From the standpoint of dynamic efficiency, we would treat joint venture property differently from single-firm property only if we had strong a priori reasons to believe that doing so would increase long-run consumer welfare. Because we see no economic reasons to disfavor the joint venture form systematically, we see no reasons why requiring joint ventures to share their property except in very unusual circumstances would increase long-run consumer welfare.

Thus, Step 2 of our analysis deals with joint venture actions that have significant adverse market effects: (a) any joint venture that would exercise significant market power and not produce important efficiencies would be illegal along with (b) any joint venture operating rule or practice that would be a significant exercise of market power and does not produce important efficiencies. In Step 2, we impose the burden of proof on the joint venture to establish efficiencies, with the understanding that the burden is to present a plausible case that the practice has been adopted to achieve efficiencies. Once the joint venture has met this burden, the burden shifts to the complainer to establish that the explanation is merely a pretext._ The joint venture practice is illegal only if the complainer sustains its burden of proof that the practice imposes significant consumer harm (Step 1) and that the joint venture's efficiency explanation is a pretext (Step 2). One could argue that the joint venture should have to prove by the preponderance of the evidence that its practice results in efficiencies. We believe that burden is too hard to meet in practice, and that imposing that burden would result in beneficial joint venture practices being condemned at this stage. As we have already discussed, joint ventures have to adopt rules for dealing with a variety of problems and have to adopt those rules through a complicated political decision-making process. Given the tenuous nature of the joint venture bond, it is difficult to document to outsiders that particular rules are necessary for holding the organization together or policing particular behavior. Those difficulties do not mean that we should give joint ventures a license to adopt any rule they want and cloak it in a vague efficiency defense. But these difficulties do suggest that triers of fact exercise some care in distinguishing valid efficiency defenses from invalid ones. Imposing a burden on the joint venture to establish efficiencies would prevent valid practices from filtering through this screen to the full-blown rule-of-reason analysis. We would suggest, instead, that the joint venture bear a somewhat weaker burden of proof at this stage, namely, that it bear the burden of establishing a plausible justification for its practice. If it cannot present a plausible justification (as would be the case for a naked restraint of trade), it fails the second stage. In addition, if the complaining party can show based on the preponderance of the evidence that the plausible justification is merely a pretext, the joint venture fails the second stage as well. For example, the complaining party might have testimony or documents from joint venture members that establish that the proposed justification has no business merit and was manufactured solely for litigation.

Step 3 is the full-blown rule-of-reason analysis, wherein efficiency benefits are to be weighed against anticompetitive harms. Here we would impose the burden of persuasion on the complaining party to show anticompetitive harms and on the joint venture to establish offsetting benefits. The trier of fact would then weigh the magnitude of the relative benefits and costs, taking into account the credibility of the underlying proof.

We believe that the principle that joint ventures are not to be favored or disfavored per se has two important implications at this stage. First, courts should be just as reluctant to impose structural remedies on joint ventures as they are to impose such remedies on single firms. That is, joint ventures should be forced to expel or admit members only under exceptional circumstances, corresponding to dismemberment of a single firm or imposing relief under the essential facilities doctrine, respectively. This approach therefore results in a safe harbor for joint venture actions that would ordinarily be permitted if the joint venture were a single firm, subject to the qualifications in the discussion above (e.g., a switch to price fixing by a large venture is not safe). We would allow joint ventures to form if the same set of single firms were allowed to

merge. We would almost always allow joint ventures to exclude members just as we almost always allow a single firm to turn away prospective acquisition targets or to refuse to license its patents, trademarks, copyrights or other property to other firms.

Second, in evaluating rules and policies of joint ventures, courts should make due allowance for the fragility of the joint venture form and the consequent difficulty of specifying workable "less restrictive alternatives." Individual rules and practices should be considered as elements of productive joint ventures, not as isolated agreements between actual or potential rivals. To be clear: this is a call for humility, not for relaxed enforcement.

Our approach differs from the classic treatment of joint ventures by Pitofsky primarily in emphasis._ Like him, we advocate a more or less traditional rule-of-reason analysis with de facto per se treatment limited to naked restraints that clearly have no offsetting virtues (e.g., practices that impose significant consumer harm under Step 1 and no efficiencies under Step 2). We argue, however, that this rule-of-reason analysis should consider the effects of antitrust treatment on the incentives to form joint ventures and should recognize economic and organizational problems that are unique to joint ventures. We also place a reduced burden on the joint venture to "prove" efficiencies at the efficiency screen. Our approach is also consistent with much of the recent case law on joint ventures, including BMI, NaBanco, NCAA, Northwest Stationers, and Rothery.

Components of the Rule-of-Reason Analysis

We now consider in some detail three important issues that affect the implementation of the analysis described above. First, we discuss the use of market-share tests for assessing the likelihood of consumer harm. Second, we discuss potential efficiencies from joint venture rules. Third, we discuss our reasons for distinguishing between structural and operational rules in evaluating the net effects of joint venture rules.

Measurement of Market Power and Effects_

The first and foremost question in the inquiry is whether there is any reason to believe that the formation of a joint venture or any of its subsequent actions will result in consumer harm through increased prices, reduced output, lower quality, less innovation or along any other dimension valued by consumers. A proper antitrust inquiry is, of course, only concerned about consumer harm that is significant in magnitude and in duration._ Otherwise, almost any market phenomenon could be described as resulting in consumer harm.

The assessment of a joint venture's market power is undertaken only to facilitate answering the real antitrust question: how important are the potential anticompetitive effects resulting from a joint venture action? The answer to that question for any particular joint venture will generally depend on the action being considered. Accordingly, the appropriate measure of market power depends on the joint venture action in question. It is illustrative to consider two situations.

When a group of firms agree to jointly set price, price competition among those firms is eliminated. Economic theory predicts that this will generally raise the market price and lower market output. Moreover, economic theory generally predicts that the greater the share of market output affected by the agreement, the greater the effect on price and output. In this case, it is sensible to aggregate the market shares of the firms participating in the price-fixing arrangement as a rough proxy for their market power, since that total share is the portion of the industry excluded from price competition.

On the other hand, when incumbent firms collectively take action to prevent a new firm from entering their industry, that eliminates price (and other) competition between the potential entrant and the incumbent firms. In this case, the effect on competition depends primarily on the amount of output that is excluded from price competition; that is, how much output would the potential entrant(s) have produced absent the entry restriction? The importance of the market effect is not reliably signaled by the aggregate market share of the incumbent firms._

The point of this discussion is that even though a joint venture in aggregate might have a large share of the

market, a correct economic analysis must consider the market effects of its collective actions. The aggregate share of a joint venture is the same whether it is making trivial decisions, such as what the dinner menu should be at membership meetings, or engaging in actions that raise serious anticompetitive concerns, such as collective price determination. What is relevant is not the aggregate share of the joint venture; it is the implications of a particular action for competition and consumer welfare.

Dennis W. Carlton and Alan S. Frankel have proposed an alternative measure of market power for use in assessing joint venture rules._ They argue that: "[T]he antitrust inquiry should focus on the joint venture's collective market share and collective market power. Otherwise, any joint venture that could find indirect methods to raise price through the use of nonprice rules, including exclusionary conduct, would enjoy immunity under the antitrust laws."_ The problem with this "collective market-share" rule is that it is divorced from the very economic question the trier of fact should focus on: what is the presumptive competitive consequence of the rule or action? Their rule would find that a large joint venture exercises market power when it excludes a tiny inefficient firm as well as when it excludes a large efficient firm from the joint venture. The former exclusion would have no measurable effect on price or output while the latter might. Their rule would also open to challenge routine business behavior engaged in by a large joint venture, such as setting a research budget, even when a casual look at the plausible effects of that behavior would find no anticompetitive risks.

Efficiency Justifications

The experience of economists in assessing the efficiencies resulting from joint venture practice is limited. Accordingly, we reach the issue of efficiencies only when there has been a finding that a particular practice has likely anticompetitive effects. The rule-of-reason analysis we have proposed would then consider whether that business practice produces important efficiencies that could not readily be achieved by an obvious alternative practice that would have no anticompetitive potential. This step of the analysis should be informed by our earlier discussion of the organizational problems unique to joint ventures.

A joint venture is inherently prone to ineffective decision making because members' objectives and perceptions may diverge. Firms, therefore, will generally want to collaborate only with other firms that are known to share similar goals and views of the world. It is important to recognize that more than purely "economic" factors may be present in these decisions. For example, firms are more likely to collaborate effectively if they have had prior experience together or if they are likely to view problems and solutions from similar perspectives. These are legitimate and important business motivations that cannot easily be understood as part of a standard antitrust analysis that presumes unitary firms and arms' length contracting. The reasons why firms might or might not work well together are often very specific to the industry and the participants in question.

A joint venture of independent firms must implement rules to minimize the extent of free riding and other negative externalities that individual firms might impose on each other. The venture will also want rules that promote the realization of positive externalities that can benefit the venture collectively. A joint venture, on the other hand, must use explicit agreements (as well as informal understandings) to control the divisiveness arising from firms' pursuit of their own self-interests and made more complex by differences in their objectives. As with structural decisions, the solutions to these operational problems will often depend on the industry and the particular firms at issue. We should therefore be receptive to the different solutions that different businesses will implement.

At the second stage of our analysis, it is possible in principle to demonstrate that a particular operational rule with anticompetitive costs has no offsetting efficiency benefits because the observed efficiencies could be realized by a "less restrictive" operational rule with no anticompetitive consequences. But we would urge caution in attempts to imagine "less restrictive" alternatives to joint venture rules. It is too simple for economists and lawyers, acting as armchair business people to make conjectures about solutions to joint venture problems that involve less anticompetitive potential. It is a quite different matter to demonstrate that such solutions are likely to work in practice, whereas the rules actually implemented by joint ventures have generally been proven by experience to be functional and stable. Therefore, the argument that there are alternative joint venture rules that are less restrictive must be viewed with a carefully skeptical eye.

Structural and Operational Rules

This last point is relevant also to the evaluation of an operational rule at the third stage of our analysis. To evaluate anticompetitive costs and efficiency benefits, one must have an alternative, "less restrictive" rule to use as baseline. An understanding of the complexity of the joint venture organizational form indicates that the process of devising such baselines should be undertaken with considerable humility. In particular, the analyst must take carefully into account the interactions among a joint venture's rules and policies. Doing so will make one less ready to decide that particular rules can easily be dispensed with because they are not "reasonably ancillary" to the efficient operation of the venture._

Courts typically approach proposed structural relief with the sort of humility that we advocate here: they are reluctant to divide ongoing enterprises or to compel a single firm to share its property. If one accepts that the joint venture form is not to be arbitrarily favored or disfavored, it follows that a similar reluctance is appropriate in the context of proposals to dismember a joint venture or to compel a joint venture to share its property by adding new members. Unless one wants to differentially discourage the use of joint ventures to create valuable assets, the essential facilities doctrine should be used (along with analysis of risks of overinclusiveness) to analyze proposals that joint ventures be forced to take on new members just as it is applied to proposals that single firms be forced to share their property.

We believe that a joint venture should be forced to admit new members only under exceptional circumstances. Forcing a joint venture to admit a member is tantamount to forcing it to share its property with other firms. Property rights are fundamental to economic incentives. Degrading the property rights of joint ventures would reduce the incentives of joint ventures to form in the first place. From the standpoint of dynamic efficiency, we would treat joint venture property differently than single-firm property only if we had strong a priori reasons that doing so would increase long-run consumer welfare. There are several reasons to believe that requiring joint ventures to share their property would only very rarely increase long-run consumer welfare.

First, economic theory does not generally predict that exclusion from a joint venture will harm consumers in either the short run or the long run. Exclusion may have no material effect if the excluded party can compete in the market without being a member of the joint venture, if the addition of output by the excluded party is small relative to the market, or if the joint venture members compete in the output market so that the addition of another firm would alter the distribution of profits but not increase output.

Exclusion may have beneficial effects on consumers if it prevents the joint venture from becoming too big (and being better able to exercise market power for this reason) or if exclusion causes the excluded party to compete against the joint venture. Exclusion could have a material effect if the excluded party could increase output or lower price much more through the joint venture than it could if it pursued its next best alternative. But the overall effect is ambiguous, and there is absolutely no reason, absent detailed analysis, to expect that joint venture exclusions are generally more likely to be anticompetitive than procompetitive. Second, there are several reasons to believe that joint ventures would choose to exclude firms for sound reasons. Certain potential members may attempt to free ride on the past investments and risk taking of the existing joint venture partners without providing any offsetting benefit to the venture. Also, certain potential members may disrupt the joint venture's fragile decision-making and organizational processes. For example, consider an industry in which ordinary, unitary firms compete with one or more joint ventures. The unitary firms could attempt to disrupt their joint venture competitors by joining these ventures and attempting to influence joint venture decisions in ways that advantage the unitary firms. Third, requiring joint ventures to admit members could have several indirect consequences that would reduce the efficiency of joint ventures. If joint ventures know that they will lose the right to reject members once they become big (and therefore fail the Carlton-Frankel market-power test), they may choose not to become big. As a result, they may compete less intensively and forego scale, scope or network economies available from further expansion. On the other hand, a policy of forcing admission implies directly that joint ventures that have become big will likely just become bigger. Such a policy would encourage the formation of industry-wide joint ventures even though it may be more efficient to have multiple joint ventures, or a mixture of competing joint ventures and proprietary firms.

Safe Harbors

The application of this structured rule-of-reason analysis results in two kinds of safe harbors for joint ventures: safe harbors for joint ventures that lack market power and safe harbors for joint venture practices that would not be suspect if adopted by a single firm.

Market-Power Safe Harbors

In general, joint venture practices that do not harm consumers significantly are legal. Therefore, practices adopted by productive joint ventures that have small shares of a relevant market are presumptively legal. More generally, policies adopted by a productive joint venture whose members could legally merge should be presumptively legal, even if they would be per se illegal if adopted by unintegrated firms. If complete integration, which would eliminate competition, would be legal, there is no economic reason to apply a stricter standard to partial integration.

Practices adopted by nonprofit joint ventures that have a large share collectively of a relevant market but whose members compete intensively within that market should also be presumptively legal._ That is, joint ventures that adopt the following structure should be given wide latitude under the antitrust laws: (1) the members of the joint venture compete effectively with each other so that any rents generated by particular practices are rebated to consumers through lower prices; and (2) the joint venture is operated on a nonprofit basis so that it is not possible for the joint venture to collect rents centrally and then reimburse them to its members.

Structural Safe Harbors

Moreover, allegedly exclusionary joint venture practices that would be permitted a single firm composed of the venture's members are also presumptively legal. In particular, joint venture rules that prevent nonmembers from using the joint venture's property through membership or other affiliations are presumptively legal. We generally do not require single firms to share their property with other firms, and we would provide under our rule the same deference to joint ventures. This safe harbor follows from our proposition that the rule-of-reason analysis of joint ventures, like the case law on single firms, should distinguish between structural and operational issues. It also follows from our neutrality principle—the antitrust laws generally should not arbitrarily handicap joint ventures.

On the other hand, we would not want to extend safe harbor protection to joint venture rules that limit intra-venture competition, unless the joint venture falls into the market-power safe harbor just discussed. We do not require single firms to compete with themselves on price, for instance, but, as discussed above, there are circumstances under which we would enjoin restrictions on price competition among the members of a joint venture. In particular, if a venture began small with unrestricted price competition, came to dominate an industry, and then attempted to restrict price competition among its members, we would presume its attempt unlawful.

Importance of Safe Harbors

The advantage of these safe harbors, like other safe harbors, is they provide joint ventures with some assurance that following efficient business practices—or just following business practices that imperfect managers happen to think are the best they can do—will not result in treble damages, legal expense, and the diversion of management time. Demonstration that its practices fall into one of our safe harbors should enable a joint venture to prevail on summary judgment and discourage plaintiffs from suing initially. That certainty is important for joint ventures because this organizational form is saddled with numerous organizational and management problems and therefore particularly delicate.

Our approach is consistent with the recent case law on joint ventures. The courts have evaluated joint venture practices under a rule-of-reason analysis at least since BMI. In Mountainwest, for example, a practice-specific market-power screen was central to the court's conclusion that Visa had not violated the antitrust laws in denying admission to Dean Witter. In Rothery, the court noted the absence of market

power of the joint venture as a sufficient basis for deciding in favor of the venture's operating rules. And in Chicago Bulls II, the court noted the necessity of a showing of market power as part of the rule-of-reason analysis.

Application of the Rule of Reason

In this section, we consider the application of the proposed three-step rule-of-reason analysis to a number of historical antitrust cases.

Joint Venture Structure

In Penn-Olin, Pennsalt and Olin, two chemical products companies, formed a joint venture to both build a new sodium chlorate plant and to sell the product in the southeastern region of the United States._ Before the formation of the venture there were only three producers of sodium chlorate in the region. Olin was not a producer, Pennsalt had a 9 percent share in the market, and the other two firms had a combined share of 91 percent and were roughly equal in capacity and market share._ Three years prior to the joint venture, Pennsalt and Olin entered into an agreement whereby Olin operated as the seller for Pennsalt's production from its plant in Oregon. In between the time of the sales agreement and the joint venture, both Penn and Olin had independently investigated the possibility of building a sodium chlorate plant in the southeast. Pennsalt's management concluded it was "unlikely" that it would build a plant by itself and thought of Olin as a "logical partner." Olin's management did not feel that its independent project "showed any merit worthy of serious consideration."

The Court found the joint venture questionable on the theory that it foreclosed potential competition from Olin, and left the issue for remand. The lower court subsequently found that there was no showing that either firm would have been likely to enter the market by itself in the absence of the joint venture,_ and we would reach the same result in our analysis. In Step 1, it does not appear from the record that the venture would have produced significant anticompetitive harms. It is far from clear that either Pennsalt or Olin would have built a plant in the southeast, let alone both of them independently. If no potential entry were precluded by the formation of the venture, then no harm to competition would exist. The joint venture should have been within the safe harbor afforded by Step 1.

Even if we were to move to Step 2,_ the case to be made for the efficiencies from the joint venture seem persuasive. The fact that Pennsalt and Olin decided to enter as a joint venture when both were dubious of independent entry (even without entry by the other) suggests that efficiencies were present in their joint venture. Although the Court did not delve into the issue of efficiencies, even from the opinion it would appear likely that one obvious complementarity was between Pennsalt's experience in building and operating a sodium chlorate plant and Olin's experience in selling the product in the region. Moreover, Pennsalt had no experience selling in the region (except for one specific customer in Florida), and Olin had no experience in the production of sodium chlorate. Their existing business agreement made them even more compatible partners.

While we have obviously not performed a full rule-of-reason analysis here, based on the evidence summarized in the decision, we would approve the joint venture: the efficiencies described above seem substantial, and there was no persuasive showing of market power in the first place. As regards efficiencies, we would stress that it seems likely that the venture created competition that would not otherwise have existed, and that the combination of firms reflects the business judgment that we have emphasized in choosing partners who have complementary skills and who have a basis of trust from existing relationships.

In Associated Press,_ the member newspapers of Associated Press (AP) had passed rules giving each local member some power to exclude its local nonmember competitors from joining AP. The concern expressed by the Court was that this exclusionary power would inhibit competition in the newspaper industry because "a newspaper without AP service is more likely to be at a competitive disadvantage."_ The Court believed that the importance of AP service to a newspaper was demonstrated by the fact that 96 percent of U.S. morning newspapers had AP service.

We now apply our rule-of-reason analysis to Associated Press. If AP's membership rules were an exercise of market power, the power being exercised must have been in each local newspaper market. In fact, AP had very substantial competitors in United Press (UP) and International News Service (INS), which were privately owned, operating through systems of affiliated newspapers. In 1942, the total expenditures of AP and its subsidiaries were approximately $13 million, those of UP and its affiliates were approximately $9 million, and those of INS and its affiliates were also approximately $9 million. While expenditures do not directly measure the value of news services, it at least seems clear that AP was not in a monopoly position in the provision of national news.

A potential anticompetitive concern would arise if two conditions were true: (1) access to a national news service were essential for a local newspaper to be viable; and (2) access to all three national services had been foreclosed by the actions of a rival newspaper. We assume, for the sake of argument, the first condition to be true. If a local newspaper did not have access to AP, but did have access to UP and/or INS, it is difficult from the evidence in the decision to see any significant competitive harm. It is only if a local newspaper had acquired the ability to deny its competitors access to all three of the news services that an anticompetitive danger would arise. The real market-power issue should not have been about the collective decision making of the AP members, but rather about the ability of individual newspapers to secure exclusive access to AP, UP and INS and about the competitive viability of papers with only UP and INS access._ Associated Press should properly have concerned whether individual newspapers had acquired essential facilities, and also whether AP, along with UP and INS, had conspired in those acquisitions. While Associated Press, as we have analyzed it, does not pose a question of joint venture access, it does present an illustration of joint venture membership rules worth noting. The power of a local newspaper to exclude competitors was in fact only the power to require an applicant to pay a fee to AP of 10 percent of the total assessments paid by member newspapers in the same competitive market from 1900 to the date of entry._,_ This joint venture rule has an apparent efficiency justification. This rule gave members the incentive to develop the value of the AP service because they would receive benefits from new members joining as AP became more successful. This rule also provided a disincentive for newspapers to wait and see if AP members developed a useful service and then join since the longer a newspaper delayed entry, the greater the fee it would have to pay if it chose to enter. Even so, if the AP venture had a significant ex ante probability of failure, a firm might still be better off waiting to join, thus avoiding the risk of failure and paying no premium over competitors in the event of success. If AP's membership rule had been an exercise of the joint venture's collective market power, these efficiencies may well have been sufficient to pass Step 2, and we would reach a full rule-of-reason analysis in Step 3.

Price/Output Restraints

In Topco, independent supermarket chains were assigned exclusive territories for the sale of private label goods produced through the joint venture. Step 1 of our analysis would likely find that no market power was exercised by these chains which averaged only 6 percent in their respective regions._,_ We do not even need to reach the issues of efficiencies in this analysis though we describe them elsewhere in this paper to illustrate the potential costs of not having a market-power safe harbor.

In Addyston Pipe,_ a combination of cast-iron pipe manufacturers and vendors formed an explicit agreement, including territorial restrictions and collusive bidding, that had the effect of raising price for pipe over three-quarters of the United States._ This combination comprised about 65 percent of industry capacity in their operating areas and competition from other regions was possible but limited by significant freight costs._ In Step 1 of our analysis, because of the sizeable collective market share and the fact that the practice at issue is a restraint on price and output, we would find that this arrangement constituted an exercise of market power, so we would proceed to Step 2 to consider efficiencies from this arrangement. The only efficiency-related defense was that the prices charged by the combination were "reasonable" and designed to prevent "ruinous competition."_ This does not come close to showing the existence of a productive joint venture, let alone that important efficiencies resulted from the agreement and it can therefore be declared illegal without any further analysis._

In BMI, BMI and ASCAP's repertories jointly covered virtually all U.S. copyrighted compositions, with BMI and ASCAP having rights to about 1 million and 3 million compositions respectively._ Because of

the shares of BMI and ASCAP and because the blanket licenses at issue do require price setting, under Step 1 we would most likely find evidence of market power. The blanket licenses issued by BMI_ are, however, a valuable new product that could not exist without setting the price for the blanket license, so Step 2 is satisfied and we proceed to Step 3.

While we cannot pursue a full rule-of-reason analysis here, we agree with the Court's observation that the existence of a "substantial lowering of costs, which is of course potentially beneficial to both sellers and buyers, differentiates the blanket license from individual use license."_ The important factor is that BMI created a new and valuable product that by its very nature necessitated collective price determination. The blanket license eliminated the enormous transactions costs that would have had to be incurred if every organization that wanted to play a selection of music had had to engage in individual negotiations with copyright holders. We also urge caution in examining whether alternative arrangements with less anticompetitive potential are possible. The particular structure of BMI and its products reflects business judgments specific to the industry. It is easy to imagine, for example, that the courts might want to require BMI to offer a range of sub-licenses with less comprehensive coverage so that BMI's consumers would have more choices. It is harder to understand that such a requirement might well produce serious political conflicts within the organization, as all members would want to be included in all sub-licenses.

In Mass. Board,_ the state agency regulating optometry in Massachusetts set rules that prohibited optometrists (who provide eye examinations): (1) from advertising or offering discounts for their services; and (2) from allowing optical establishments (which make and sell eyeglasses) to advertise the availability of optometrists' services._ In Step 1 of our analysis, we would find evidence that these prohibitions are likely to harm consumers. The first restriction, if at all effective, is likely to result in higher prices than without the prohibition. The second restriction prevents optical stores from fully informing consumers about the range of services available. In particular, new entrants would seem to be particularly handicapped and this restriction would thus, to some extent, deprive consumers of the benefits of price competition by entrants. Given that the state agency regulates all optometrists in the state, anticompetitive harm seems especially probable.

Reaching Step 2, we find no plausible evidence of any procompetitive efficiencies from the agency's prohibitions. The only efficiency justification cited in the decision for the prohibition against price advertising was that this was intended to prevent optometrists from charging higher than usual fees to some groups of consumers. In fact, the prohibition was used to prevent discounts from usual fees to consumer groups such as senior citizens and company employees. The agency's only justification for the restrictions against informative advertising was that such advertising was inherently deceptive and that the public needed protection against undue commercial influence. While the agency should certainly prevent false and deceptive advertising, it is implausible that the public needs any protection from truthful and informative advertising or from commercial and competitive forces. The restrictions in Mass. Board therefore do not pass Step 2 of the analysis.

Other Horizontal Restraints

In Rothery, the combined share of the agents for Atlas Van Lines was between 5 and 6 percent of the long-distance moving market._ There is no issue of market power_ at Step 1, so the venture's rules are permissible.

In NaBanco,_ the joint venture practice at issue was the determination by Visa of the terms of settlement of payment card transactions (interchange) processed through the Visa system. The relevant market defined by the district court was all payment devices, and Visa's collective share was less than 5 percent of that market._ The analysis in Step 1 would therefore permit Visa to set its interchange fee, assuming that this is the correct relevant market. For the sake of argument, consider a more restrictive market definition such as general purpose payment cards. While Visa had a much higher market share by this definition, the business practice in question was still not an exercise of market power. There was no showing in NaBanco that consumers were harmed by Visa's setting its internal transfer payments._ Indeed, as we described above, there are considerable efficiencies resulting from this practice, but they do not need to be considered since a showing of consumer injury is not made in Step 1.

In FTD,_ the practices in contention were rules that required florists who received orders for FTD products to process them through the FTD clearinghouse rather than any of the other national floral product clearinghouses. FTD had a 65 percent share of the long-distance floral business._ As with the analysis in NaBanco, however, despite this large market share, the business practice at issue does not appear to harm consumers in any way. No evidence was presented that consumers would receive even short-term benefits from florists being permitted to process transactions for FTD products through other clearinghouses. The FTD restrictions would accordingly be legal under our analysis.

Critique of Recent Suggestions Concerning Antitrust Policy Towards Joint Ventures

Although the judicial treatment of joint ventures is a not a model of doctrinal clarity, by and large, the courts recently appear to have done a reasonably good job of separating procompetitive from anticompetitive joint venture practices in particular cases. Topco and Sealy are notable historical exceptions. Nevertheless, we believe that the application of the principles and framework we have laid out above would enable the courts to screen joint venture practices more efficiently and would provide businesses with a higher degree of certainty about the legality of particular joint venture rules. Several authors, however, have proposed other ways of examining joint ventures for antitrust purposes that, if adopted, would increase both the likelihood that the courts would condemn procompetitive joint venture practices and the uncertainty about outcomes in particular cases. We examine the merits of some of the more recent of these proposals in this section._

While our discussion in this section focuses on our disagreements with the specific approaches and rules that these authors present, we should note at the outset that we agree with these authors, and they agree with each other on a number of critical points. There seems to be a general agreement that only the most naked horizontal restraints—pure price fixing among unintegrated horizontal competitors—should be treated as per se illegal._ The courts generally came around to this view in the early 1980s._ Thus, most commentators and the courts seem to agree that joint venture practices should generally be treated under a rule-of-reason analysis. Most commentators and the courts also recognize the importance of considering free riding and other efficiency explanations for joint venture actions._ Finally, several commentators with whom we disagree on specifics recognize the important effects of ex post interventions on ex ante incentives. They recognize that antitrust policy towards joint ventures can have profound effects on the incentives to start welfare-enhancing joint ventures in the first place.

Differences remain, however, over the order of the inquiry and who bears the burden of proof at each stage of the rule-of-reason analysis. The first two proposals discussed below argue that factual inquiry should begin by requiring efficiency defenses for challenged practices of joint ventures, with practices that cannot be shown to be efficiency enhancing declared unlawful without inquiry into their impact on consumers. The other proposals are broadly consistent with our view that the first step should require a showing of consumer harm. In addition, several of the proposals discussed below argue that the location of the burden of proof should depend on the particular joint venture action or type of joint ventures.

The Mass. Board Rule

In its 1988 Mass. Board decision, the Federal Trade Commission presented and employed a four-stage approach to the analysis of agreements between competitors:_

Is the restraint "inherently suspect," that is, of the "kind that appears likely, absent an efficiency justification to 'restrict competition and decrease output'?" If it is not, "the traditional rule of reason . . . must be employed." If, on the other hand, the restraint is inherently suspect, move to the second step.

The defendant must now demonstrate efficiencies. If it cannot advance a "plausible efficiency defense for the practice," that practice is condemned without extensive factual inquiry. A plausible efficiency defense moves the analysis to Step 3.

If the defendant has demonstrated that its efficiency defense is "really valid," the analysis moves to Step 4.

Otherwise, the practice is illegal because it is inherently suspect and not efficiency enhancing.

At this stage, "the full balancing test of the rule of reason" must be employed to assess the desirability of the practice at issue.

In the context of joint ventures, the first stage of this procedure is troublesome for several reasons. First, while it is sensible to designate certain practices, like price fixing, as "inherently suspect" in isolation, this sort of labeling makes relatively little sense when applied to only some of the rules and policies that define a productive joint venture. Suppose two small banks start a new payment card joint venture and decide to determine the card's interest rates, annual fees, and other terms and conditions jointly. Their managers believe, (based on their experience, not nicely bound consultants' studies) that this will enable them to market more effectively to cost-conscious consumers. Is this practice "inherently suspect" because it is price fixing, or is it not because it is part of a productive joint venture that is a new entrant? The first answer makes little economic sense, while the second reduces the Mass. Board rule to the "traditional rule of reason." Second, an important reason why the first answer makes little economic sense in this example is that the Mass. Board rule has no market-power test. In some sense, this rule attempts to replace a careful inquiry into the likelihood of consumer harm with a quick look at the form of the practice involved. This raises the likelihood that harmless practices will be condemned. Third, simply asserting that practices that are not "inherently suspect" should be evaluated using the "traditional rule of reason" provides no guidance to the analysis of a large fraction of cases likely to arise in this area. Fourth, there is no sort of safe harbor here; nothing protects a joint venture from litigation over collective determination of dates of board meetings.

We also have some related concerns regarding the second step in this analysis. Just as we do not believe that a quick look at a challenged practice is a good substitute for a factual inquiry into the likelihood that the practice will harm consumers, we worry that a quick look at the plausibility of proffered efficiency defenses may result in hasty condemnations of efficiency-enhancing joint venture practices with effects that are not easily grasped in the abstract. Given the complexity and delicacy of the joint venture form and the analytical difficulties it presents, we do not see merit in a rule that permits a single practice of a productive venture to be condemned without the venture being allowed to present evidence bearing on the question of efficiencies. It is just not that easy, based on current knowledge, to evaluate efficiency claims without factual information.

The Mass. Board approach has been employed by the Commission only in Detroit Auto Dealers,_ and it has been discussed (fairly critically) only by the court that heard the appeal in that case._ Recently, in California Dentists,_ the Commission declined to follow the Mass. Board analysis._ Instead, it accorded analysis of efficiencies, market power, and competitive effects roughly parallel treatment.

The Klein Rule

Joel I. Klein, Assistant Attorney General for Antitrust, has recently proposed a stepwise process for evaluating horizontal agreements such as those necessary in joint ventures._ The first step in his proposal is to determine whether the agreement is a naked restraint of trade—one that falls into one of the generally well-accepted categories of per se violations such as an unadorned price-fixing agreement. Such agreements are illegal and the analysis ends. Those that are not move on to the second step, which is key:
[I]f we conclude that a horizontal agreement that directly limits competition on price or output between or among competitors is not per se illegal, we then inquire whether there's a procompetitive justification for the agreement. We put that question to the party defending the agreement, and we expect a response that doesn't merely speculate about the existence of efficiencies, but rather comes forward with real-world evidence—factual evidence, expert economic evidence, and preferably both—to support the claim._
If the defendant cannot prove that there is a procompetitive justification for the agreement, the agreement is condemned and the inquiry ends. As Klein puts it: "the key point I want to stress here is that only if there are real procompetitive benefits should there be any need to show actual anticompetitive effects." If there are procompetitive justifications, we move on to the third step. That step balances the procompetitive effects of the rule against the anticompetitive effects.

Klein's stepwise approach therefore imposes the burden of proof on the parties to the agreement to show strongly that there are efficiencies or other procompetitive benefits from the agreement in order to avoid condemnation. Plaintiffs can prevail without ever demonstrating that a joint venture rule harms consumers; such a demonstration is called for only if defendants have first managed to establish efficiencies. There are both practical and policy reasons for objecting to this assignment of the burden of proof.

From a practical standpoint, economists and the courts have developed many powerful tools for determining whether firms are exercising market power and for assessing the resulting consumer harm but they are much less adept at evaluating or quantifying efficiencies. The examination of anticompetitive effects relies on well-developed theories of firm and market behavior and various often-used empirical techniques for testing competitive hypotheses based on these theories. A typical modern merger analysis relies on the sophisticated economic framework originally developed in the 1982 Merger Guidelines, econometric evidence concerning the effects of the proposed merger on prices and output, and game theoretic-based simulation models of market effects. These same theories and techniques are now also widely used in economic testimony in antitrust litigation not concerned with mergers.

The evaluation of procompetitive effects, on the other hand, runs into several problems. Procompetitive effects such as elimination of free-rider problems, scale, scope and network economies, and efficiencies of integration are more amorphous and more difficult to quantify than anticompetitive effects such as increases in price or reductions in output. Part of the difficulty in quantifying procompetitive effects is that these effects tend to be much more fact-specific than anticompetitive effects. For example, economic theory tells us that the merger of two firms to dominance will usually result in an increase in price absent countervailing increases and points us to statistical techniques and market data for assessing the likely magnitude of the price increase. Economic theory provides a framework for thinking about scale, scope and network economies. But whether any particular integration yields these economies is usually an entirely open question. While economics has techniques for measuring scale, scope and network economies, the data necessary for these techniques to yield precise estimates are seldom available in practice. Free-riding claims are even more difficult to assess. Economic theory recognizes the problem and might provide some guidance on the circumstances under which it is a relevant consideration. But it provides little help in providing specific evidence of free riding that could satisfy the burden of proof presented by Klein.

A good example of the difficulties in proving efficiencies is MountainWest._ Dean Witter, the owner of the Discover Card, wanted to become a member of the Visa joint venture through MountainWest, a failed savings and loan it had purchased for this purpose from the Resolution Trust Corporation. Visa argued that it did not want Dean Witter to become a member because it thought that having a direct competitor in the system would be disruptive and could result in Discover gaining access to competitive information. To us, this seems like a commonsense concern that any business, faced with the prospect of letting a competitor onto its property, would have. It is unlikely, however, that Visa could have provided "real-world evidence" to support a burden of proof that its exclusion of Dean Witter from Visa was procompetitive. And it certainly could not provide "expert economic evidence" on this matter, other than to say that the concern seemed plausible._ That contrasts with the inquiry in consumer harm, for which the tools of industrial organization and antitrust analysis could provide guidance on whether the exclusion would result in a significant reduction in output and increase in price.

The location of the burden of proof should be based in part on the reliability and cost of acquiring evidence to meet that burden. As a practical matter, we believe that the evaluation of anticompetitive effects can be accomplished with existing techniques more reliably and at lower cost than the evaluation of procompetitive effects.

From a policy standpoint, the burden of proof should be based in part on a presumption concerning whether the non-naked horizontal agreements under consideration are more likely to be anticompetitive or procompetitive. We believe that productive joint ventures and their operating rules are more likely to be procompetitive on balance, and that the burden of proof should fall on those who claim that the reverse is true. There are many circumstances under which joint venture members have procompetitive reasons to restrict each others' behavior. These include concerns over free riding, coordination, and the need to make

returns sufficient to warrant risk taking and investment. The existing evidence on joint ventures suggests that they are fairly fragile organizational forms that are generally used to secure efficiencies that could not be obtained easily through other organizational forms._ We are aware of no evidence that suggests that joint ventures, or the kinds of horizontal agreements that fall short of naked restraints, are a common vehicle for engaging in anticompetitive behavior.

Finally, Klein's stepwise approach would arbitrarily place joint ventures at a competitive disadvantage relative to alternative organizational forms. Joint ventures would have to incur the cost of showing that all rules and actions adopted collectively were procompetitive and would not be able to employ rules and actions for which they could not meet this burden of proof. When ordinary firms make routine decisions or adopt operating rules, they do not have to ask themselves if they can provide sufficient "factual evidence, expert economic evidence, and preferably both" to prove that their actions are efficiency enhancing. There is simply no economic justification for forcing joint ventures, alone, to prepare to justify every action in such detail. Aside from arbitrarily hobbling existing joint ventures, and thus reducing competition in some markets, the Klein rule would reduce the value of the joint venture form relative to other forms and would discourage entrepreneurs from choosing this form in the first place. That would result in more entrepreneurs choosing to merge their businesses, or to sacrifice potential gains from integration, or to abandon attempts to innovate or to compete in new markets.

The Pratt et al. Rule

William H. Pratt, James D. Sonda, and Mark A. Racanelli consider refusals to deal by "network" joint ventures._ They point out that the distinguishing characteristic of network joint ventures is that the venture's ability to produce some useful good or service, or to do so efficiently, increases as membership in the joint venture network grows. That is, there are positive network externalities.

In their view, the proper antitrust analysis hinges critically on the existence of positive network externalities. They begin with an examination of refusals to deal by non-network joint ventures. For these joint ventures, they recognize that refusals to deal are often motivated by a desire to prevent free riding—the attempt by nonmembers to share in the fruits of the success of the joint venture without having borne the risks and costs. Free riding, they suggest, is particularly important in the case of research and development joint ventures. They give the example of firms A and B collaborating on the development of a chip. These firms expect to obtain a return from their investment through their joint ownership over the chip. Firms C and D seek entry into the joint venture after these risks and investments have been borne by A and B. They correctly observe that A and B would likely not have started the joint venture if they had known they would have to admit C and D. The antitrust laws should permit the refusal to deal because we want to encourage the formation of these kinds of joint ventures.

But, they argue, network joint ventures are fundamentally different. They note that "[b]ecause network joint ventures generate more efficiencies as more and more members join, exclusion of competitors may actually diminish the network's value by restricting the ability of the network to generate network efficiencies."_ In other words, since A and B benefit from the admission of C and D, they should also admit E . . . Z to gain even more positive network externalities. Their refusal to admit any of E . . . Z raises an anticompetitive concern. As a result, "[c]ourts should be thoroughly satisfied that an exclusion, in fact, contributes to the generation of network efficiencies."_ They criticize several court decisions that have given too much deference to the free-riding argument.

In analyzing the implications of positive network externalities, these authors apparently adhere to the Klein Rule:

[T]he permissibility of an exclusion pursuant to a venture rule should depend upon whether the venture can articulate and demonstrate how the exclusion contributes to the generation of network efficiencies. . . . [T]he reasons given by a network joint venture for an exclusion should be closely scrutinized and tested. Where a network is unable to show that an exclusion is related to the creation of network efficiencies, the exclusion should raise competitive concerns under the antitrust laws._
Thus, the burden is on the joint venture to come up with an efficiency explanation for its actions—and that

explanation must be related to network externalities._

The authors appear to recognize that prospective entrepreneurs have to have the proper incentives to make risky investments in joint ventures. But, all new ventures are risky, not just those involving research and development. There is no a priori reason to believe that network joint ventures are less risky investments than research and development joint ventures. In fact, there are features of network industries that make ventures in these industries particularly risky. Economists have recognized that it is possible that only a handful of networks will survive in many industries and that relatively small differences between ventures can determine success or failure._ Therefore, there does not appear to be any reason to distinguish between network joint ventures and non-network joint ventures based on the riskiness of the venture and the expected returns necessary to bear that risk.

The authors also correctly recognize that free riding is a legitimate policy concern. In their explanation for a non-network joint venture, they also appear to recognize that free riding may prevent the joint venture partners from realizing the necessary expected returns from their risky investments. Since most joint ventures (like most firms) do not succeed, a corollary of this proposition is that joint ventures must be able to realize ex post supracompetitive profits if they do succeed in order to provide adequate incentives for investment. Otherwise, the ex ante expectation of profits would be less than the competitive level (since failures get less than competitive returns, and possibly lose money on net). But there is no reason to believe, as Pratt et al. assume, that free riding—and the necessity of obtaining ex post supracompetitive returns—is less of a problem for network joint ventures than non-network joint ventures. The early members of a network joint venture make investments with uncertain payoffs. While new members increase network efficiencies, they may also reduce the returns to earlier members through competition. Prospective network joint venture members can free ride on the investments and risk taking of existing joint venture members in exactly the same way as occurs in non-network joint ventures. While network efficiencies may counteract free-riding effects to some extent, there is no reason to believe that they exactly counteract each other.

Pratt et al. make too much of network efficiencies. They write as if it is easy in practice to tell which joint ventures are "network" joint ventures and which are not. In fact, like most other sources of efficiency, network economies are much easier to assert than to prove. Moreover, we would expect that there are diminishing network efficiencies. At some point, we would expect that additional network efficiencies from new members would fall to close to zero. It is hard to imagine that the Visa and MasterCard systems would gain anything at all from having one more New York bank join their systems, for instance, even though the addition of the first such bank might well have had profound positive network externalities. When network externalities have fallen to near zero, free-riding effects have exactly the same importance as they do for non-network joint ventures. Therefore, there does not appear to be any reason to distinguish between network joint ventures and non-network joint ventures based on the existence of free riding.

The authors also err in treating network economies as somehow economically unique. Joint ventures can realize efficiencies in a variety of ways and many of these ways depend on adding new members. Sometimes joint ventures obtain efficiencies as a result of obtaining synergies from the operations of different members. Sometimes they obtain efficiencies as a result of economies of scale from consolidating production—the more members there are, the greater the scale economies. And sometimes they gain efficiencies as a result of network effects—the value of the joint venture product increases as a result of new members. All of these benefits from adding members are potential offsets to the costs of possible free riding from additional members and are thus economically equivalent in important respects. None of these factors, however, necessarily exactly offsets the cost of free riding.

Network joint ventures may refuse to admit members for a number of economic reasons. First, it is possible that network efficiencies are exhausted at some point, in which case there may be no economic advantage from additional members. Second, it is possible that certain members reduce the returns to existing members sufficiently that the costs of admitting these members outweigh the benefits. If we recognize that ex ante expected profits must at least equal competitive levels, it is hard to see how we could deny joint ventures the right to protect their profits. Pratt et al. apparently agree with this proposition in the abstract but ignore its implications for the proper treatment of network joint ventures. Third, the prospect

of free riding is only one of the reasons why the benefits of admitting new members may outweigh the costs. Specific new members might degrade the product because of their reputation. Or they may pose a particularly severe competitive threat—armed with the joint venture's property—to the joint venture. In all of these cases, the admission of some of C, D, . . . Z to a joint venture started by A and B may reduce the ex post returns to A and B sufficiently to reduce the ex ante returns to the "next" A and B's investment below competitive levels. Forcing admission would therefore discourage the formation of welfare-enhancing joint ventures.

Finally, it is striking that Pratt et al. seem to attach no substantial weight to the dangers of overinclusive joint ventures. At least to some extent, joint ventures tend to reduce potential and sometimes actual competition among their members. As joint ventures admit new members or absorb other joint ventures, competition tends to be diminished. Because of these competitive costs, even if one attached no importance to long-term incentive effects, one should be reluctant to force admission into joint ventures unless some positive benefit from doing so can be demonstrated. Pratt et al., instead, put the whole burden of proof on network joint ventures that do not wish to expand by adding members. It is as if a single firm that did not want to merge or to share its property with rivals were to be given the burden of proving that its refusal directly generated efficiencies—and only efficiencies of a particular sort.

Pratt et al. have provided no compelling distinction between network and non-network joint ventures. Their sensible analysis of the importance of ex ante incentives for non-network joint ventures applies equally well to network joint ventures. At a minimum, therefore, there would appear to be no basis to impose a different rule—or "heightened scrutiny," to use their term—on network joint ventures than on non-network joint ventures. Likewise, there is nothing special about network joint ventures that would indicate that we should impose the burden on them to show efficiencies.

The Carlton-Frankel Rule

The discussion in two articles by Dennis W. Carlton and Alan S. Frankel seems derived from something like the following rule:_

Does the joint venture have collective market power? Collective market power may be measured by aggregating the shares of the joint venture members in the relevant antitrust market or by other means. If no, the joint venture rule or action is legal. If yes, proceed to Step 2.

Does the joint venture rule adversely affect consumers? If not, the rule is legal; if so, proceed to Step 3.
If the joint venture can prove that the rule is "reasonably necessary for [the venture's] efficient operation," it is legal; if not, it is illegal._

As we have discussed, the notion that aggregate market share gives a generally useful measure of market power, independent of the rule under consideration, is fundamentally unsound. We thus believe that the first step in this framework is at best superfluous and at worst misleading, and we would proceed directly to the second step. (Part of that step might involve a computation of the share of the market affected by a particular practice, of course, but that need not coincide with the aggregate market share of the joint venture's members.) At that stage we are in rough agreement: a structural or operational rule that does not harm consumers should be legal without need for a showing of efficiencies.

The third stage of the Carlton-Frankel test does not involve a comparison of costs and benefits; it stacks the deck significantly against joint ventures, particularly as regards structural rules. A joint venture that prevents its members from selling its product to shops selling pornographic publications, for instance, would certainly harm at least some consumers in the short run. This restriction may enhance the collective value of the venture, but it would not likely be possible to show it is "reasonably necessary . . . for efficient operation."

Similar problems arise with structural rules, with potentially more serious consequences. In the MountainWest case, Carlton and Frankel claim to have established that exclusion of Dean Witter from Visa harmed consumers, though the Circuit Court found otherwise._ Their rule would then effectively require

the admission of Dean Witter to Visa. Since Visa had accepted new members in the past, it would be difficult for it to show that excluding any new member was "reasonably necessary" for anything. As we have already discussed, there is no economic basis for giving joint venture property less respect than single-firm property. If we want joint ventures to form at the optimal rate, it would not seem prudent to tell prospective entrepreneurs that if they choose the joint venture form, they are more likely to have to share the fruits of their enterprise than if they merge with potential collaborators or forego the benefits of collaboration.

The Carlton-Frankel rule as they apply it to MountainWest also encourages joint ventures to stop admitting new members before they have exhausted all available efficiencies. A joint venture that closes before it reaches the critical level for Carlton and Frankel's collective market-share test does not have to admit any additional members, since its rules are not required to meet any efficiency test. Alternatively, a joint venture has an increased incentive given their rule to close at its initial formation. Both of these consequences are especially likely since open joint ventures that close are a particularly suspect category under the Carlton-Frankel framework: having been open in the past, it is hard to show that closing is "reasonably necessary for . . . [their] efficient operation."_

The Carlton-Frankel rule also produces a curious and perverse result that shows that their overall approach is unsound. Compulsory access increases the size of the joint venture, and if market power can indeed be measured by aggregate market share, thereby increases its market power. It is therefore illogical to assert that a high collective share implies market power and that market power implies compulsory access that can only increase collective market share._

The Carlton-Salop Rule

In a recent paper, Dennis W. Carlton and Steven C. Salop propose a framework for what they describe in their paper's title as "restrictions on access to input joint ventures."_ They begin with a presumption that property developed by joint ventures should not be given the same protection as property developed by a single firm:

If a private firm develops a new product or is simply successful, it rarely is forced to share its assets with (i.e., provide access to) its rivals. . . . In contrast, a joint venture more commonly can be compelled to provide access to a firm that will compete against its members. . . . The main reason for the distinction in antitrust treatment between single firms and joint ventures is that a joint venture involves coordination among competing firms and can be used as a vehicle to suppress competition in ways unrelated to or unnecessary for the efficient production of its product . . . ._

There are two problems with this presumption. First, it rests on a very incomplete view of joint ventures. Joint ventures can sometimes mask suppression of competition; more commonly they can make possible the production of new goods and services. We believe that anticompetitive behavior by joint ventures should be dealt with directly, not by disfavoring an organizational form that has substantial associated benefits; Carlton and Salop obviously disagree. Second, once you accept that joint ventures are to be discouraged by placing their property at risk, as Carlton and Salop do, there is no obvious standard for the appropriate level of discouragement. Carlton and Salop deal with this problem by essentially ignoring all benefits from investment by joint ventures and focusing entirely on the short-run costs and benefits of forcing a joint venture to share its property. There is no economic justification for such a myopic approach to policy.

This myopia is compounded by their dismissal of arguments about overinclusiveness._ They contend that if expansion of a joint venture would diminish competition, the existing members of the joint venture should favor such expansion. This is only partly true, since expansion may have other effects that make it unfavorable on balance to existing members; it is too strong to argue, as Carlton and Salop do, that overinclusiveness arguments cannot be credibly made by existing joint venture members and should thus be rejected.

Carlton and Salop propose that if a merger of a joint venture's members with applicants excluded by an

access rule would not raise price as compared to a situation in which the applicants are allowed to join, exclusion should be per se legal._ While this test would surely serve to permit joint ventures with very small aggregate market shares to exclude small applicants, we can find no economic justification for it. Unless the joint venture fixes prices, a hypothetical merger among its members does not seem relevant for any analysis of access rules.

They also propose what they describe as a second per se rule:_

[I]f the venture and its members have collective market power in both the input and output markets and if there are no efficiency or competitive justifications for the denial of access, little would be lost by enjoining the denial of access through a standard of per se illegality.

They add in a footnote that "proof of antitrust injury by the plaintiff should also be required."_ This is the rule that plaintiff advocated in MountainWest and that the Circuit Court rejected. It would condemn denial of access by a joint venture with a large collective market share, regardless of the intensity of competition among the venture's members and even if no harm to competition or to consumers could be demonstrated, unless the venture could somehow meet the difficult burden of establishing efficiency or competitive justifications—most of which Carlton and Salop have ruled out in earlier discussion. Only if one is determined to disfavor joint ventures substantially could one justify forcing a joint venture to share its property even if its refusal to do so could not be demonstrated to cause substantial competitive harm! Carlton and Salop conclude their article by briefly outlining a "structured rule-of-reason" analysis to be used when their "proposed per se rules cannot be applied without risking significant error," though they neglect to tell the reader how to identify such cases._ Their rule-of-reason proposal is as follows:

First, the plaintiff must state a logically consistent and plausible claim of anticompetitive harm and antitrust injury. Second, the court should determine whether the alleged anticompetitive harm is likely to be significant. Third, the court should evaluate the magnitude of any efficiency or other competitive benefits claimed for the access restrictions and balance them against the magnitude of any anticompetitive harm._ This proposal resembles ours in that the plaintiff must first establish that the challenged exclusion would cause substantial anticompetitive harm, and it differs from the per se rule just above that would require no such demonstration. We would also agree that if the defendants could credibly allege no competitive or efficiency benefits, the restriction should be found illegal. But we part company with Carlton and Salop at the final stage. In order not to arbitrarily disfavor the joint venture form, we believe that courts should employ the same standards for forced sharing of property that are employed in cases involving single firms. It simply disregards too much to focus only on short-run costs and benefits in a single market and to ignore long-run effects on incentives to innovate and to form joint ventures.

Hovenkamp Rule

Herbert Hovenkamp has proposed a more general framework for evaluating joint venture exclusion rules._ He recognizes that there are potentially procompetitive and anticompetitive effects of exclusion rules, and that the possibility of exclusion may affect the desirability of the joint venture in the first place:

The difficult problem for antitrust policy is that the very same exclusions that facilitate anticompetitive behavior may have been essential to create the incentives to form the joint venture in the first place. Firms invest in joint ventures in order to improve their own market position; if everyone in the market has an automatic right to join, then the incentives to form the venture are correspondingly reduced._

He proposes a stepwise inquiry into joint venture exclusion rules that we paraphrase:

Does the exclusion facilitate unadorned price fixing? Concerted refusals to deal with customers are suspicious while concerted refusals to deal with rivals are less so. If yes, the exclusion is condemned; if no, the inquiry proceeds to Step 2.

Does the exclusion reduce output or raise prices in some relevant market? If no, the exclusion is lawful; if yes, proceed to Step 3.

Does the exclusion further legitimate efficiency goals? Legitimate efficiency goals are those that increase venture-wide output for the existing venture. If yes, the exclusion is lawful._ If no, the exclusion is illegal unless the venture can prevail under Step 4.

Are free-rider concerns sufficient to produce substantial disincentives to creating similar ventures in the future? These concerns must be explicitly defined and proven. If yes, the exclusion is legal, unless the challenger can prevail under Step 5.

Are there less restrictive alternatives to the exclusion that would reduce the free-rider problem? If yes, then the exclusion is illegal.

Hovenkamp's stepwise inquiry imposes a much less stringent burden of proof on the joint venture than does the Klein rule for horizontal agreements or the Pratt rule for joint venture exclusions. Aside from naked restraints, joint ventures can do what they want so long as their actions do not reduce output or raise price in some relevant market._ Hovenkamp provides, as do we, a safe harbor. Unlike Klein and Pratt, he does not sweep up innocuous joint venture rules and actions into a difficult debate over whether there are true efficiencies.

Once it has been established that the joint venture rule or action raises price or reduces output, the burden shifts to the joint venture to show that there are offsetting efficiencies that would result in an increase in output (and presumably a decrease in price) or that the rule or action is necessary for preserving the incentives to form joint ventures in the first place by policing free-rider problems. Here we part company with Hovenkamp._ Joint venture rules and actions that exclude prospective members or otherwise amount to a refusal to deal with competitors are equivalent to a refusal to share the joint venture's property with other firms. We believe that joint ventures ought not to be handicapped on this dimension relative to unitary firms.

By shifting the burden of proof to the joint venture, Hovenkamp imposes a stiffer requirement on joint ventures than the antitrust laws would ever impose on a single firm._ The joint venture would have to show that its refusal to share its property is designed to increase efficiency or deal with significant free-rider concerns. As we explained above in discussing the Klein approach, these burdens of proof are very difficult to meet in practice. The party that desires the joint venture's property would not have to show that the property is particularly useful, much less essential, for it to compete or for competition itself.

A further problem with Hovenkamp's analysis is that his fourth question concerning free-rider concerns is either unanswerable or irrelevant in practice. Many joint ventures fail or do not earn sufficient returns to warrant their risky investments._ Any reduction in the value of joint venture property rights will inhibit the formation of joint ventures. There is no way to determine the magnitude of the inhibition. Moreover, trying to figure out the expected profit calculus that the joint venture partners went through at the start of the joint venture and the effect of free-riding concerns on that calculus would be a judicial quagmire. Another problem with Hovenkamp's analysis is that it ignores the fact that joint venture exclusion rules tend to hinder the joint venture from becoming large. There are at least two reasons to believe that exclusion rules are welfare enhancing in the long run. First, overinclusive joint ventures reduce the incentives for the formation of competing joint ventures or single firms. Second, overinclusive joint ventures may encounter scale, scope or network diseconomies.

Hovenkamp's approach, oddly, encourages big joint ventures to become even bigger. Once a joint venture has acquired market power (graduated from Step 2), it has to bear the burden of proof of showing strong efficiency or free-rider effects should it wish to cease adding new members. That encourages joint ventures that have obtained market power to absorb all comers. In the context of merger policy, such an approach would seem exactly backwards. At the very least, the dangers posed by overinclusiveness are increased by this approach. We do not see its economic or antitrust logic, nor did the Tenth Circuit in MountainWest.

Summary

We have proposed a structured rule-of-reason analysis for evaluating joint venture practices. The analysis

begins with a market-power screen followed by an efficiency screen and culminating in a balancing test for joint ventures that appear to impose consumer harm but also appear to have countervailing efficiencies. The implementation of the rule is guided by three principles: (1) the application of antitrust rules should not handicap joint ventures relative to single firms; (2) the application of antitrust rules should recognize that joint ventures have different problems and solutions than single firms; and (3) the application of the antitrust rules should strongly discourage firms from using joint ventures to mask cartel-like behavior. The first of these principles is particularly powerful. The willingness of many writers to advance proposals that conflict with it suggests that it is controversial, though we have seen no explicit arguments advanced against it.

For the market-power screen, we have argued for placing the burden of proof on the antitrust authorities and private plaintiffs to show that the joint venture practices in question impose significant consumer harm. For the efficiency screen, we have argued for placing a more modest burden of proof on joint ventures to demonstrate plausible efficiencies from their practices with the burden then shifting to the plaintiff to show that these efficiencies are pretextual. We have also suggested that the rule-of-reason analysis recognize that joint ventures, whether or not they involve networks or network economies, may have to pass rules to deal with externality, coordination, and other problems.

This approach results in several safe harbors for joint venture practices. In general, joint venture practices that do not harm consumers are legal. This follows from the market-power screen. Moreover, exclusionary joint venture practices that would be permitted by a single firm formed by a merger of joint venture participants are also presumptively legal. In particular, joint venture rules that prevent nonmembers from using the joint venture's property through membership or other affiliations are presumptively legal. This safe harbor follows from the principle that antitrust should not arbitrarily handicap joint ventures relative to unitary firms and from the principle that single firms are required to share property with rivals only under exceptional circumstances. The importance of property rights to the economy broadly implies that structural relief, which would alter the membership of a productive joint venture, should be employed only under the sort of conditions under which a court would dismember a single firm or force it to merge with a rival.

The advantage of these safe harbors is they provide joint ventures with some assurance that following efficient business practices—or just following business practices that imperfect managers happen to think are efficient—will not result in treble damages, legal expense, and endless depositions of top executives. Because showing that a practice falls into one of our safe harbors should enable the joint venture to prevail on summary judgment, unproductive lawsuits should be deterred. This sort of protection is particularly valuable for joint ventures because this socially valuable organizational form is fraught with numerous organizational and management problems and is therefore particularly fragile.

_ Benjamin Gomes-Casseres, The Alliance Revolution 4 (Cambridge, Harvard Univ. Press 1996).
_ Stratford Sherman, Are Strategic Alliances Working?, Fortune, Sept. 21, 1992, at 77.
_ Jeremy Main, Making Global Alliances Work, Fortune, Dec. 17, 1990, at 121.
_ Charles Haddad, In Due Time, Turner Stock Strategy Paying Off, Atlanta J. & Constitution, July 25, 1997, at 01F.
_ Kourash Karimkhany, NBC, Microsoft Challenge CNN, Detroit News, Dec. 15, 1995; James Coates, Can Microsoft Master Success?, CHI. TRIB., July 13, 1997 at C1.
_ Michele Kayal, BA, AA Flying Into Rough Skies, J. of Commerce, July 23, 1997.
_ John Wilen, Telcos Go After International Markets, InfoWorld, July 21, 1997, at 53.
_ Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations (R.H. Campbell & A.S. Skinner eds., Clarendon Press 1976).
_ Richard L. Schmalensee, Agreements Between Competitors, in Antitrust, Innovation, and Competitiveness (Thomas M. Jorde & David J. Teece eds., Oxford University Press 1992).
_ Joseph F. Brodley's definition captures the essence: "[A] joint venture may be defined for antitrust purposes as an integration of operations between two or more separate firms, in which the following conditions are present: (1) the enterprise is under the joint control of the parent firms, which are not under

related control; (2) each parent makes a substantial contribution to the joint enterprise; (3) the enterprise exists as a business entity separate from its parents; and (4) the joint venture creates significant new enterprise capability in terms of new productive capacity, new technology, a new product, or entry into a new market." See Joseph F. Brodley, Joint Ventures and Antitrust Policy, 95 Harv. L. Rev. 1521, 1526 (1982).

_ Michael Slater, Apple, IBM and Motorola Sign Contracts for Far-Reaching Collaboration, Microprocessor Report, Oct. 16, 1991, at 1.

_ New United Motor Builds Three-Millionth Vehicle, Bus. Wire, May 16, 1997.

_ See Christy Hudgins-Bonafield, Can Smartcards Unlock Electronic Cash Vaults?, Network Computing, July 15, 1997, at 24; Mondex International Company Profile (visited July 26, 1997) <_ HYPERLINK "http://www.mondex.com/mondex/cgi-bin/printpage.pl?english+global&company.html" __http://www.mondex.com/mondex/cgi-bin/printpage.pl?english+global&company.html_>.

_ U.S. Department of Justice, Antitrust Guide Concerning Research Joint Ventures (Nov. 1980), reprinted in Trade Reg. Rep. (CCH) No. 466 (Dec. 1, 1980) [hereinafter, RJV Antitrust Guide].

_ National Cooperative Research Act of 1984, 15 U.S.C.S. §§ 4301-5 (LEXIS 1992).

_ See SAIC to Acquire Bellcore, Bus. Wire, Nov. 21, 1996; ISCP Number Portability Solution Now Generally Available to North American Carriers, Bus. Wire, Apr. 22, 1997.

_ White House Ceremony with Big 3 Automakers Unveils Technology Initiative, PR Newswire, Sept. 29, 1993; Noelle Knox, "Supercar" Partnership to Focus on Designing Diesel Engine, Sacramento Bee, July 25, 1997, at D1.

_ MCC Names Marek E. Rusinkiewicz Vice President, Bus. Wire, July 16, 1997.

_ Thomas M. Jorde & David J. Teece, Innovation, Cooperation, and Antitrust, in Antitrust, Innovation, and Competitiveness 47, 57 (Thomas M. Jorde & David J. Teece eds., Oxford Univ. Press 1992).

_ National Cooperative Research and Production Act of 1993 § 2, 15 U.S.C.A. §§ 4301-6 (West 1997). The NCRPA has not had a significant impact, in part because joint venture restrictions on independent marketing by members are not covered. See Joseph Kattan, Contemporary Antitrust Analysis of Joint Ventures: Why It Makes Sense to Stay the Course, Prepared Statement for the Federal Trade Commission Hearings on Joint Venture Project (June 5, 1997); Joseph Kattan, Testimony at the Federal Trade Commission Hearings on Joint Venture Project (June 5, 1997).

_ See The National Pork Producers Council and the National Cattlemen's Beef Association Fully Support the EU, U.S. Agreement, PR Newswire, May 1, 1997.

_ For example, the Florida Department of Citrus is an executive branch of the Florida state government. It oversees the marketing, research and regulation of the industry. See, Florida Department of Citrus Hires the Richards Group, PR Newswire, July 29, 1996.

_ For example, the National Dairy Promotion and Research Board receives a portion of mandated levies on dairy farmers and milk processors. See, Dairy Evaluations Provide Generic Advertising Base, Milling & Banking News, Mar. 18, 1997, at 9.

_ See Milt Freudenheim, Merck and Swedish Concern Join, N.Y. Times, Nov. 2, 1994, at D5.

_ By contrast, we would tend to think that a manufacturing firm, for example, has very good information on its own production costs and has reasonable information on demand for its product. This is not to say that it would not receive some benefit from industry-wide data.

_ Robert K. Graves, Statement on Behalf of the HDTV Grand Alliance Proponents, Address Before the Committee of Science, Space and Technology, Subcommittee on Technology, Environment and Aviation, U.S. House of Representatives, Federal News Service, June 24, 1993, available in LEXIS, News Library, Arcnws File.

_ Chris McConnell, Broadcasters Arm for ATV Fight, Broadcasting & Cable, Oct. 21, 1996.

_ The computer industry did not want the standard to include interlaced scanning of signals and the motion picture industry wanted an aspect ratio that would better accommodate motion pictures. See id.

_ Paul Farhi, FCC Adopts Digital TV Standards, The Wash. Post, Dec. 27, 1996, at G1.

_ RJV Antitrust Guide, supra note _ NOTEREF _Ref393517552 \h __14_, at 1.

_ National Cooperative Research and Production Act of 1993 § 2, 15 U.S.C.A. § 4302.

_ See generally, Josh Lerner & Robert P. Merges, The Control of Strategic Alliances: An Empirical Analysis of Biotechnology Collaborations (National Bureau of Econ. Research Working Paper No. 6014, 1997).

_ See id. at Table 2.

_ See Bristol-Myers Squibb and Progenics Pharmaceuticals Announce Licensing Agreement for Cancer

Vaccines, PR Newswire, July 16, 1997.
_ See Bus. Wire, supra note _ NOTEREF _Ref394668735 \h __18_; Thomas Cothran, Large Companies Form Research and Development Corp., Associated Press, Jan. 25, 1983.
_ See Toshiba Supplies High-Speed Cable Data System to Time Warner Cable Operation in Portland, Maine, Bus. Wire, Oct. 8, 1996; Time Warner Selects Scientific-Atlanta as Prime Contractor for "Pegasus" Digital Network, Bus. Wire, Dec. 10, 1996.
_ U.S. Department of Commerce, Survey of Current Business at Table B.4 (June 1997).
_ See, e.g., Larry Lipman, Election '92: The Candidates on Healthcare, Atlanta J. & Constitution, Oct. 19, 1992, at A6; and Cost-of-Benefits Analysis: Study Shows Employer Healthcare Spending on Rise, Modern Healthcare, Jan. 27, 1997, at 24. Recently the move towards managed-care plans has helped to stabilize growth in costs; see CBO Projects 7% Increase in 1995 Healthcare Costs, Modern Healthcare, Aug. 28, 1995.
_ U.S. Department of Justice and Federal Trade Commission Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Antitrust (1994), reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,152 (1996).
_ The Webb-Pomerene Act of 1918, 15 U.S.C.S. §§ 61-66 (LEXIS 1996), provides a limited antitrust exemption for the purposes of collective export sales.
_ See, e.g., Joel Bleek & David Ernst, The Way to Win in Cross-Border Alliances, in Collaborating to Compete 17, 19-21 (Joel Bleek & David Ernst eds., John Wiley & Sons, Inc. 1993).
_ Main, supra note _ NOTEREF _Ref393517614 \h __3_, at 121.
_ See CFMI Adds Assembly in France for Boeing to Keep Up with Surge, Aviation Daily, June 17, 1997, at 468.
_ See David S. Evans & Richard L. Schmalensee, A Guide to the Antitrust Economics of Networks, 10 Antitrust 36-40 (Spring 1996).
_ FTD Realigns to Improve Customer Service, Bus. Wire, Jan. 6, 1997.
_ We are viewing this from the firms' perspectives. If a joint venture includes all the activities of the firms involved, it is, of course, privately inferior to a merger. Forming a joint venture including only some of the firms' activities may well be superior to a merger that would combine unrelated businesses.
_ There remains the issue of whether firms have the incentive to join a venture in the first place, given that the benefits of the venture will spill over to non-members.
_ See, Ronald H. Coase, The Nature of the Firm, in Ronald H. Coase, The Firm, The Market, and the Law (Univ. of Chicago Press 1990); Oliver E. Williamson, Markets and Hierarchies: Analysis and Antitrust Implications (Free Press 1975).
_ See generally, Brodley, supra note _ NOTEREF _Ref393517639 \h __10_.
_ This is particularly true if we are comparing a joint venture to a single, merged firm that has a unified objective. We discuss below these problems in more detail.
_ See Lerner, supra note _ NOTEREF _Ref393517671 \h __32_, for a brief discussion of these issues.
_ Of course, the firm could always hire a marketing firm, but, as we described above, there might be contractual difficulties when the enterprise is complex. The biotechnology industry, discussed above, is an example of the value of joint ventures in matching up firms with pure research ability with firms with development and marketing skills because development and commercialization of products is a lengthy and complicated process.
_ See Richard L. Schmalensee, Antitrust Issues Related to Networks, Testimony Before the Federal Trade Commission (Dec. 1, 1995).
_ Evans & Schmalensee, supra note _ NOTEREF _Ref394670816 \h __44_.
_ See Jean Tirole, The Theory of Industrial Organization 414 (The MIT Press 1988). This might, of course, result in a reduction in the variety of, for example, research and development effort. We note that joint ventures can themselves undertake a mix of research and development projects, but the question of what industry structure produces an optimal variety of research and development is unresolved.
_ Gene Slowinski, The Human Touch in Successful Strategic Alliances, Mergers and Acquisitions, July-Aug. 1992.
_ Caroline Ellis, Making Strategic Alliances Succeed: The Importance of Trust, Harv. Bus. Rev., July-Aug. 1996, at 8.
_ Jason Pontin, Taligent bails out of object OS; gives its all to CommonPoint development platform, InfoWorld, May 29, 1995, at 12.
_ IBM to Absorb Taligent Venture as Subsidiary; Big Layoffs Planned, PCWeek, Dec. 4, 1995.

_ Bart Ziegler, IBM, Apple, HP to disband Taligent; big layoffs loom at software venture, Wall St. J., Dec. 1, 1995, at B5.
_ Mary Jo Foley, Taligent's future remains in doubt; CEO leaves, questions linger, PCWeek, Sept. 18, 1995, at 31.
_ An individual firm may still have incentive problems because different business units have different objectives (see Williamson, supra note _ NOTEREF _Ref393519237 \h __48_, for a general discussion). But the different units still ultimately report to top management whose goal is to maximize profits for the firm as a whole.
_ Paul A. Allen, Testimony Before the Federal Trade Commission for the Joint Venture Project (June 24, 1997).
_ Id.
_ See James P. Johnson, Procedural Justice Perceptions Among IJV Managers, in Cooperative Strategies: North American Perspectives 197, 205 (Paul Beamish & J. Peter Killing eds., The New Lexington Press 1997).
_ Sherman, supra note _ NOTEREF _Ref394805746 \h __2_. Besides being reiterated in the popular press and among consultants such as McKinsey's Bleek and Ernst, there exists significant evidence for the importance of trust. See Sarkar et al., A Commitment-Trust Mediated Framework of International Collaborative Venture Performance, in Cooperative Strategies: North American Perspectives 255 (Paul Beamish & J. Peter Killing eds., The New Lexington Press 1997).
_ See Bruce A. Walters, Strategic Alliances and Joint Ventures: Making them Work, Bus. Horizons, July, 1994, at 5; Slowinski, supra note _ NOTEREF _Ref393519752 \h __56_; Ellis, supra note _ NOTEREF _Ref393519809 \h __57_.
_ As with any group, joint ventures therefore need to decide who should belong. That leads joint ventures, as we discuss below, to adopt explicit or implicit rules that exclude all outsiders or selected outsiders from joining. (A joint venture with no explicit provision for admission of new members other than through renegotiation of the basic venture agreement(a "closed" joint venture(will not generally have an explicit membership policy, but it is likely to exclude all outsiders.) For discussion regarding the difficulty of compulsory access orders because they do not solve(and may exacerbate(fundamental conflicts between the entity brought into the venture and the incumbent members see Donald Baker, Compulsory Access to Network Joint Ventures Under the Sherman Act, 1993 Utah L. Rev 999, 1004 (1993), David Balto, Access Demand to Payment Systems Joint Ventures, 18 Harv. J. L. & Pub. Pol'y 623 (1995), and Joseph Kattan, Antitrust Analysis of Technology Joint Ventures: Allocative Efficiency and the Rewards of Innovation, 61 Antitrust L. J. 937 (1993).
_ See Jordan D. Lewis, Partnerships for Profit 253-78 (The Free Press 1990).
_ The Taligent venture also included Hewlett-Packard.
_ Lewis, supra note _ NOTEREF _Ref393520367 \h __69_, at 255.
_ The length of time needed to negotiate and establish joint ventures is correspondingly longer than what is typically needed for merger. Merck senior vice president Francis Spiegel, Jr. states "you can hammer out a megamerger deal in 60 days, but these joint ventures can easily take a year to negotiate." See Sherman, supra note _ NOTEREF _Ref394805746 \h __2_.
_ See discussion regarding the historic tendency of the courts to treat joint ventures with hostility in Baker, supra note _ NOTEREF _Ref393520663 \h __68_, at 1004.
_ United States v. Topco Assocs., Inc., 405 U.S. 596 (1972).
_ See Brodley, supra note _ NOTEREF _Ref393517639 \h __10_, at 1535.
_ See U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines (1992), reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,104 at 20,569-3 (1997) [hereinafter 1992 Merger Guidelines].
_ The notion of potential competition is implicit, for example, in discussions concerning innovation markets. See Richard J. Gilbert & Steven C. Sunshine, Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets, 63 Antitrust Law Journal 569 (1995).
_ United States v. Penn-Olin Chem. Co., 378 U.S. 158 (1964).
_ Topco, 405 U.S. at 608.
_ Topco, 405 U.S. at 613-14.
_ See Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 792 F.2d 210 (D.C. Cir. 1986), cert. denied, 479 U.S. 1033 (1987) [hereinafter Rothery]; Thomas A. Piraino, Beyond Per Se, Rule of Reason or Merger Analysis: A New Antitrust Standard for Joint Ventures, 76 Minn. L. Rev. (1991); and Brodley, supra note _ NOTEREF _Ref393517639 \h __10_, at 1534-35 for discussion.

_ Palmer v. BRG of Georgia, 498 U.S. 46, 49 (1990).
_ Broadcast Music Inc. v. Columbia Broad. Sys., 441 U.S. 1 (1979).
_ National Collegiate Athletic Ass'n v. Board of Regents of The Univ. of Oklahoma, 468 U.S. 85 (1984).
_ Chicago Prof'l Sports Ltd. Partnership v. National Basketball Ass'n, 961 F.2d 667 (7th Cir. 1992).
_ Chicago Prof'l Sports Ltd. Partnership v. National Basketball Ass'n, 95 F.3d 593 (7th Cir. 1996).
_ Chicago Bulls I, 961 F.2d at 675.
_ Chicago Bulls II, 95 F.3d at 599-600.
_ Arizona v. Maricopa County Med. Soc'y, 457 U.S. 332 (1982).
_ Maricopa, 457 U.S. at 351.
_ Maricopa, 457 U.S. at 357.
_ United States v. United States Gypsum Co., 438 U.S. 422 (1978).
_ Gypsum, 438 U.S. at 441 n.16.
_ See generally, David S. Evans, Trade Associations and the Exchange of Price and Nonprice Information, in 1992 and EEC/US Competition and Trade Law 709,730-737 (Barry E. Hawk ed., Juris Publications, Inc. 1990).
_ Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 792 F.2d 210 (D.C. Cir. 1986), cert. denied, 479 U.S. 1033 (1987).
_ Federal Trade Comm'n v. Indiana Fed'n of Dentists, 476 U.S. 447 (1986).
_ Indiana Dentists, 476 U.S. at 458.
_ United States v. Realty Multi-List, 629 F.2d 1351 (1980).
_ Id. at 1383.
_ Id.
_ The court made a presumption that RML possessed market power, but left the issue open for argument on remand. Id. at 1389.
_ Northwest Wholesale Stationers v. Pacific Stationery & Printing Co., 472 U.S. 284 (1985).
_ No explanation was given at the time of the expulsion. The cooperative offered this rationale as part of its court filings. Id. at 287.
_ Northwest Stationers, 472 U.S. at 296.
_ Id. at 285.
_ Schmalensee, supra note _ NOTEREF _Ref393523093 \h __9_.
_ United States v. Sealy, Inc., 388 U.S. 350 (1967). The Court found the exclusive territories assigned to Sealy's manufacturer-distributors to be impermissible.
_ One study estimated that over 50 percent of all active firms exit within the following five years, based on data from 1967 to 1982. See, Timothy Dunne, Mark J. Roberts, and Larry Samuelson, Patterns of Firm Entry and Exit in U.S. Manufacturing Industries, 19 Rand J. Econ 495, 503 (1988). Another study found that for all active firms operating in Wisconsin in 1978 (not just startups), over 36 percent had been liquidated within eight years. This does not include firms that changed ownership. See Richard Ericson & Ariel Pakes, Empirical Implications of Alternative Models of Firm Dynamics (National Bureau of Econ. Research Working Paper No. 2893, 1989). See also, Slowinski et al., supra note _ NOTEREF _Ref393519752 \h __56_; Ellis, supra note _ NOTEREF _Ref393519809 \h __57_.
_ A supracompetitive rate of return is one that exceeds market rates of return adjusted for risk.
_ See Frederic M. Scherer & David Ross, Industrial Market Structure and Economic Performance 613-60 (3rd ed. 1990).
_ "For 200 years, the incentives provided by this country's intellectual property protection system have helped us to become a world economic leader . . . ." See Donald J. Quigg, Safeguarding Intellectual Property—Stimulus to Economic Expansion, in Intellectual Property Rights and Capital Formation in the Next Decade 33, 36 (Charls E. Walker & Mark A. Bloomfield eds., University Press of America 1988).
_ See, e.g., 1992 Merger Guidelines, supra note _ NOTEREF _Ref393523531 \h _ * MERGEFORMAT _76_, at 20,569-3 to 20,570.
_ Phillip Areeda, Essential Facilities: An Epithet in Need of Limiting Principles, 58 Antitrust L.J. at 841, 851 (1990).
_ Management consultants frequently recommend either to give one parent or the other sole authority for the management of a joint venture; see Sherman, supra note _ NOTEREF _Ref394805746 \h __2_.
_ Joel Bleek & David Ernst, The Way to Win in Cross-Border Alliances, in Collaborating to Compete: Using Strategic Alliances and Acquisitions in the Global Marketplace 17, 29-30 (Wiley, Inc. 1993).
_ United States v. Topco Assocs., Inc., 1973 WL 805 (N.D.Ill.).

_ Ohio-Sealy Mattress Mfg. Co. v. Sealy, Inc., 585 F.2d 821, 847 (1978).
_ It is especially difficult to conceive of the practical feasibility of such negotiations given that all transactions need to be settled.
_ Rothery, 792 F.2d at 145.
_ See Ohio-Sealy, 585 F.2d at 829 for efficiency justifications for rules that subsequently replaced exclusive territories.
_ See 1992 Merger Guidelines, supra note _ NOTEREF _Ref394710531 \h __76_, at 20,570 to 20,571; 20,573-11; 20,573-13.
_ See, e.g., BMI.
_ Schmalensee, supra note _ NOTEREF _Ref393523093 \h __9_.
_ See Frank H. Easterbrook, The Limits of Antitrust, 63 Tex. L. Rev. 1 (1984) for a discussion.
_ This should hold a fortiori for internal rules or practices that would have no significant effects outside the joint venture. Thus, for instance, the choice of a communications protocol for use on a payments system's network should be immune to antitrust challenge, even though it may be somewhat easier for some member firms to implement the chosen protocol than for others.
_ 1992 Merger Guidelines, supra note _ NOTEREF _Ref393523531 \h __76_, at 20,572.
_ See generally Areeda, supra note _ NOTEREF _Ref394710797 \h __113_.
_ This approach is somewhat analogous to the burden-shifting approach in employment discrimination cases. After the plaintiff establishes a prima facie case of discrimination, the employer has the burden of articulating a "legitimate, nondiscriminatory reason for its actions." The burden then shifts back to the plaintiff to show that the articulated reason is merely a pretext. See Barbara L. Schlei & Paul Grossman, Employment Discrimination Law 597-603 (2nd ed. 1983).
_ See Robert Pitofsky, A Framework for Antitrust Analysis of Joint Ventures, 74 Geo L.J. 1605 (1986).
_ This section relies heavily on our earlier discussion in David S. Evans & Richard L. Schmalensee, Economic Aspects of Payment Card Systems and Antitrust Policy Toward Joint Ventures, 63 Antitrust L.J. 861 (1995).
_ See 1992 Merger Guidelines, supra note _ NOTEREF _Ref393523531 \h __76_, at 20,572 to 20,573.
_ The aggregate market share of the firms participating in the exclusionary conduct might, under some circumstances, affect the likelihood that they would be successful in their goal to exclude. But we are examining market effect contingent on the assumption that they have succeeded in the exclusion.
_ See Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_, at 866-71, for further discussion.
_ Dennis W. Carlton & Alan S. Frankel, The Antitrust Economics of Credit Card Networks, 63 Antitrust L.J. 643, 655 (1995).
_ United States v. Addyston Pipe & Steel Co., 85 F 271, 282-83 (6th Cir. 1898), aff'd 175 U.S. 221 (1899).
_ The relevant test is whether competition is intense enough so that one can presume that no monopoly rents can be earned directly by the venture participants. Unrestrained price competition in an unconcentrated market should pass this test; the test might well be failed if the joint venture permitted only limited nonprice competition. Since the joint venture is nonprofit, members cannot receive monopoly profits through the venture either. As long as the venture's operation cannot yield its members monopoly profits, the venture is entitled to the strong presumption that its acts and practices are procompetitive.
_ The litigants agreed that this was the relevant market. See Penn-Olin, 378 U.S. at 158.
_ Penn-Olin, 378 U.S. at 163-64.
_ United States v. Penn-Olin Chem. Co., 246 F. Supp. 917 (D. Del. 1965).
_ There would need to be both a greater likelihood of independent entry by both firms, and their respective potential shares would have to be large enough for there to be a concern that their combination would facilitate market power.
_ Associated Press v. United States, 326 U.S. 1 (1945). For an extensive discussion of this case and subsequent developments in the news gathering industry, see Baker, supra note _ NOTEREF _Ref393520663 \h __68_, at 1069-72.
_ Associated Press, 326 U.S. at 17-18.
_ While the members of AP did play a role in agreeing to the exclusive rights of each individual member, that is no different than the roles played by the managements of UP and INS in giving exclusivity to local affiliates.
_ Associated Press, 326 U.S. at 10-11.
_ Contracts between newspapers and UP (or INS) also required new entrants to pay significant

compensation to existing affiliates in the same market. See Associated Press, 326 U.S. at 13.
_ Topco, 405 U.S. at 596, 600.
_ As has been emphasized, a joint venture's collective market share does not necessarily equate to the appropriate measure of the exercise of market power associated with a particular rule of the venture. It does, however, place an upper bound on the exercise of market power.
_ Addyston Pipe, 85 F. at 271.
_ Addyston Pipe, 85 F. at 291.
_ Addyston Pipe, 85 F. at 291-92.
_ Addyston Pipe, 85 F. at 277.
_ If, hypothetically, it could have been shown that without price agreements the industry (not just individual firms) would not have been viable, that might constitute an efficiency defense. On the other hand, a wealth of theory and experience would give a court every reason to be skeptical of any attempted proof of such "destructive competition."
_ BMI, 441 U.S. at 5.
_ We refer to just BMI for simplicity.
_ BMI, 441 U.S. at 21.
_ Massachusetts Bd. of Registration in Optometry, 110 F.T.C. 549 (1988).
_ We consider the case in the price restraints section because of the first rule. The second rule would more properly be categorized in the next section.
_ Rothery, 792 F.2d at 217.
_ Again, we consider the collective market share only as an upper bound on the potential exercise of market power.
_ National Bancard Corp. v. VISA U.S.A., Inc., 779 F.2d 592 (11th Cir. 1986).
_ NaBanco, 779 F.2d at 604.
_ For a further discussion of NaBanco see Carlton & Frankel, supra note _ NOTEREF _Ref393527019 \h __134_, at 649-50 and Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_, at 891-93. Note that while Carlton and Frankel disagree with the court's analysis in NaBanco, they do not provide any theory as to how the practice could have harmed consumers.
_ American Floral Serv., Inc. v. Floral Transworld Delivery Ass'n, 633 F. Supp. 201 (N.D. Ill. 1986).
_ FTD, 633 F. Supp at 205.
_ Schmalensee, supra note _ NOTEREF _Ref393523093 \h __9_, discusses a number of earlier proposed frameworks for evaluating agreements between competitors.
_ See, for example, the discussion in Robert Pitofsky, supra note _ NOTEREF _Ref393623492 \h __129_, and Dennis W. Carlton & Steven C. Salop, You Keep on Knocking but You Can't Come in: Evaluating Restrictions on Access to Input Joint Ventures, 9 Harv. J. L. & Tech. 319 (Summer 1996).
_ See Schmalensee, supra note _ NOTEREF _Ref393523093 \h __9_, at 99.
_ See Joel I. Klein, A Stepwise Approach to Antitrust Review of Horizontal Agreements, Speech Before the ABA Antitrust Section Semi-Annual Fall Policy Program (Nov. 7, 1996), stating ". . . I think it's important to underscore how critical it is to take efficiency analysis seriously," and Pitofsky, supra note _ NOTEREF _Ref393529526 \h __166_, generally.
_ Mass. Board, 110 F.T.C. at 603.
_ Detroit Auto Dealers Ass'n, Inc., 11 F.T.C. 417 (1989).
_ In re: Detroit Auto Dealers Ass'n, Inc., 955 F.2d 457 (6th Cir., 1992), cert. denied 113 S.Ct. 461 (1992).
_ California Dental Ass'n, 1996 F.T.C. Lexis 88 (1996).
_ The Commission stated explicitly that the decision in Mass. Board was not being overruled. California Dentists, 1996 FTC LEXIS 88 at 60 n.26. But see Commissioner Azcuenga's dissent which argued that Mass. Board was being overruled. California Dentists, 1996 FTC LEXIS 88 at 87-88, 92-93. See also, Commissioner Starek's separate opinion, California Dentists, 1996 FTC LEXIS 88 at 155-56.
_ Klein, supra note _ NOTEREF _Ref393529815 \h __168_.
_ Klein, supra note _ NOTEREF _Ref393529815 \h __168_.
_ SCFC ILC, Inc. v. VISA U.S.A., Inc., 819 F. Supp. 956 (D. Utah 1993), rev'd in part and aff'd in part, 36 F.3d 958 (10th Cir. 1994), cert. denied, 115 S.Ct. 2600 (1995).
_ Schmalensee testified for Visa, and Chang and Evans consulted for Visa in MountainWest.
_ See Carmela Schillaci, Designing Successful Joint Ventures, 8 The J. of Bus. Strategy 59 (Fall 1987), for a discussion of the role of joint ventures as an intermediate option between internal and external development strategies.

_ Pratt was Dean Witter's lead trial lawyer in MountainWest.
_ William H. Pratt et al., Refusals to Deal in the Context of Network Joint Ventures, 52 The Bus. Law. 531, 545 (1997).
_ Id.
_ Id. at 540.
_ It is not clear whether these authors believe that a non-network joint venture should bear the burden of showing that free riding is the basis for the exclusion.
_ See Evans & Schmalensee, supra note _ NOTEREF _Ref393517704 \h __44_.
_ Carlton & Frankel, supra note _ NOTEREF _Ref393527019 \h __134_, at 643; Dennis W. Carlton & Alan S. Frankel, The Antitrust Economics of Credit Card Networks: Reply to Evans and Schmalensee Comment, 63 Antitrust L.J. 903 (1995). Carlton and Frankel never state the rule that guides their analysis in this or any other comprehensive form, and there seem to be differences between the approach adopted in their two papers. For a detailed discussion of the analysis in their first paper, see Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_. Carlton and Frankel were consultants to Dean Witter in MountainWest.
_ See Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_, at 907; Carlton & Frankel, supra note _ NOTEREF _Ref393527019 \h __134_, at 662. In their first paper they assert that "antitrust generally places the burden on [socially valuable joint] ventures to prove that the collective activity is essential to the success of the venture." In their second paper, they take Evans and Schmalensee (supra note _ NOTEREF _Ref393525707 \h __130_) to task for attacking this rule, claiming "We never state that a restriction is permitted only when it is essential to the survival of the joint venture." At any rate, we agree with their conclusion that "The essential-to-survival test . . . would be far too strict."
_ It is worth pointing out for the sake of clarity that the evidence to which they point most insistently in their writings, their statistical studies of the correlation between AT&T's entry and changes in the rate of decline of average annual fees, was not in evidence in MountainWest. In addition, since annual fees accounted for only about 15 percent of the average annual cost of a credit card in the period of interest, this correlation, even if it indicated causation, would be of little or no economic significance. See discussion in David S. Evans and Richard L. Schmalensee, Joint Venture Membership: MountainWest, in Antitrust Revolution (John Kwoka & Lawrence White eds., forthcoming 1998).
_ See Carlton & Frankel, supra note _ NOTEREF _Ref393527019 \h __134_, at 910.
_ Carlton and Frankel claim that our reasoning is wrong here, see id. at 910-911. In fact, the perverse result flows entirely from their defective market-power definition. Despite their claim that we have confused market share and market power, they state explicitly that the collective market share of the joint venture is the proper measure of market power. Of course, the collective market share does not, as we have explained above and in Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_, measure the effects of excluding members of price or output. But given their definition of collective market power, allowing additional members into the system will increase that power. They say that their test could never lead to this perverse result because in the second prong of their test they compare benefits against harms. If they properly measured consumer harms, their position would be correct. In fact, they measure competitive harm from their defective collective market-share test. See Evans & Schmalensee, supra note _ NOTEREF _Ref394980874 \h __187_, for a discussion of how their Carlton-Frankel test was actually applied in the MountainWest litigation.
_ Carlton & Salop, supra note _ NOTEREF _Ref393529526 \h __166_. By an input joint venture, they mean a venture supplying a good or service used by the venture's members to produce a product that they sell. Visa and MasterCard are input joint ventures in this sense. Salop was also a consultant to Dean Witter in MountainWest.
_ Id. at 325.
_ Id. at 336-37.
_ Id. at 346-48.
_ Id. at 349.
_ Id. at 349 n.84.
_ Id. at 350.
_ Id.
_ Hovenkamp was a consultant for Dean Witter in MountainWest.
_ Herbert Hovenkamp, Exclusive Joint Ventures and Antitrust Policy, 1995 Colum. Bus. L. Rev. 1, 7 (1995).

_ This step is presumably a check on Step 2. If output increases under the Step 3 analysis then output should have increased under the Step 2 analysis which would prevent us from reaching Step 3.
_ We assume that Hovenkamp, like many commentators, did not say significantly reduce output or raise price because that qualifier is generally understood.
_ For a further discussion of problems with Hovenkamp's analytical framework, see Evans & Schmalensee, supra note _ NOTEREF _Ref393525707 \h __130_, at 998 n.73.
_ See Areeda, supra note _ NOTEREF _Ref393631402 \h __127_.
_ See Main, supra note _ NOTEREF _Ref393517614 \h __3_, for a brief discussion of joint venture failures and associated risks.