

the additional issues that the district court wanted considered were not directly related to the specific competitive practices challenged in that case.¹⁰ In the present case, in contrast, the ethanol production and distribution capacity of both firms is inextricably linked with their HFCS production capacity. Therefore, approving this decree allowing the acquisition of MCP necessarily affects directly this related market. Hence, in order to perform its obligation to "determine that the entry of such judgment is in the public interest". Section 5(e); 15 U.S.C. sec. 16(e), the court must be informed about the other competitive effects of the merger. This is necessary even if the court's ultimate standard may only be whether the "settlement is within the reaches of the public interest." 56 F3d at 1460 (internal quotations omitted).

Prior to the acquisition, ADM was, by a very large margin, the leading producer of ethanol. Its share ranged from something over 30% to more than 50% depending on whether the base is capacity including that under construction or actual production. MCP had about 6% of current capacity. Thus the pre-merger HHI was at least mildly concentrated around the 1600 level, and this merger will increase that level by 350 to 600 points resulting in a post-merger concentration of 2000 to as much as 2300. This falls well into the highly concentrated level.¹¹

It appears that ethanol is a distinct product both because it has distinct production technology and because it is an ingredient in gasoline intended to reduce its pollution effects.¹² There was another product, methyl tertiary butyl ether (MTBE), that has recently been banned in California, one of the largest areas of consumption, because of its polluting effects on ground water. Thus, a firm able to control the production or marketing of all ethanol would have significant power over price. The geographic market seems to be national.

There are two methods of producing ethanol. The "dry" method involves grinding corn into a mash and fermenting it to create ethanol which must then be separated from the water and the residual solids. The ethanol is concentrated to achieve 100% purity and then "denatured" by the addition of some gasoline making it unfit for human consumption. The remaining solids are dried and sold as cattle feed (this is a high protein feed that appears to have significant commercial value). All new ethanol plants under construction apparently use the dry process.

The "wet" process involves a similar production of mash which is then treated to

convert the carbohydrates to sugar from which various products are produced: corn syrup, high fructose syrup, and ethanol by subsequent fermentation of the sugar. Based on some comments on a couple of web sites, it appears that there is flexibility in the wet process to choose among the types of products that will be extracted. Most of MDM's facilities and MCP's two plants are wet.

In 2001, total American production of ethanol was about 1.77 billion gallons; it is expected to rise to 2 billion in 2002 and may exceed 5 billion within a few years especially if the Senate version of the energy bill is ultimately adopted because it strongly favors ethanol. Although this section of the Senate bill was adopted in conference, no final legislation emerged from Congress this session.

With respect to the production of ethanol, the barriers to new entry seem to be low. An efficient, modern plant with a capacity of 40 million gallons costs about \$55 million to build and construction takes about a year and a half after regulatory and zoning approval. It seems easy to expand to 80 million gallons, but after that there can be serious input constraints caused by the need to buy very large volumes of corn. Also, the market for the cattle feed solids may be saturated in the immediate area. There are as many as ten or more plants under construction; most of these have a capacity of 40 million gallons, and a significant additional number are in the planning stage. This means that efficient entry can occur with a capacity that represents about 2% of present total production and less than 1% of expected production in the next few years. This suggests that adding a new plant will not disrupt the market and so entry should not be difficult. Hence, while ADM is and will remain for the foreseeable future, by a very substantial margin, the largest ethanol producer in the market, it does not appear that its acquisition of MCP will significantly alter its market power in the ethanol production market. Presumably this is the view of the government as well.

However, this merger may create significant competitive issues in the distribution and marketing of ethanol. Marketing involves both specialized equipment and skills that are subject to economies of scale and scope. Ethanol is shipped in railroad tanker cars, barges and tanker trucks from various places of production in the Midwest to California or the east coast, for example. Ethanol is often added to gasoline at the point when a tanker truck is picking up a load of gas for delivery to service stations. For this reason, access to terminal tank farms is very important in the marketing process. If a firm can not get space in the farm, the marketing of ethanol in this context is more costly (separate location means two stops and delay). A key issue can be getting such access. While the costs of specialized equipment including a dedicated tank may not be substantial, getting access in the first place may be difficult given limited space and the potential that established ethanol suppliers may have or obtain exclusionary rights in their contracts.

It appears, therefore, that there are significant economics of scale and scope in

the marketing process. The high volume marketer can get discounts and preferred service from railroads. It can afford to operate or lease barges, develop terminal storage facilities to concentrate the quantity of product for its delivery to refiners or gasoline terminal locations. Finally a major trader can get access to terminal facilities when small dealers might be excluded and/or get access on more favorable terms.

ADM is undoubtedly the largest marketer of ethanol. ADM has volume, special equipment (barges and rail cars) as well as good access to terminals and pipelines. There are two other major integrated marketers: Cargill (number 4 in ethanol production) and Williams Companies (number 3 in production) a major pipeline operator and dealer in petroleum products. Cargill and Williams have overall marketing resources comparable to ADM because of their multiple lines of business and their substantial ethanol production capacity. All three of these companies use marketing agreements to obtain additional supplies of ethanol.¹³ Although presumably the government's lawyers have examined these marketing agreements, they are not available to the public. The impression is that they usually entail exclusive dealing commitments involving a 5 year or longer obligation (early termination terms unknown) which may provide economically questionable compensation terms for the marketer in that the contracts do not provide appropriate incentives for effective and efficient marketing. Thus, such contracts are likely to confer substantial control over the marketing of ethanol on a limited group of firms.

There also appears to be a few unintegrated or less integrated firms offering distribution services as well. One such firm is Murex NA.¹⁴ Another trader—Ethanol Products—is associated with Broin Engineering, an ethanol plant builder, that represents 10 production facilities with 300 million gallons of capacity and claims another 115 million in development. There may be one or two additional marketers, but no other web sites provided very much information.

There is a plausible basis for concern that the impact of this merger in the marketing and distribution of ethanol is likely to be anticompetitive: ADM has a record of conspiring to cartelize various markets;¹⁵ Cargill the second or third largest marketer of ethanol is also in the group of defendants in the HFCS litigation; and the Williams Companies, the other large marketer of

¹³ Williams' web site claims that it markets for 14 production facilities. Cargill's cite did not provide specific information, but clearly it is seeking to act as a marketer.

¹⁴ The brief Web site description of this company (<http://www.murexna.com/Home1.htm>) suggests that it markets ethanol and other products. Its Web site reports that the company provides marketing, owns specialized railcars for transporting ethanol, and has storage facilities in key locations to hold supplies until they can be delivered. It claims to represent 60 million gallons of capacity currently but to have contracts covering 200 million gallons in place for production in 2003. This is about 10% of the 2002/3 national production capacity.

¹⁵ A.E. Staley in whose parent ADM holds a 25% stake is another ethanol producer and coconspirator in the HFCS litigation.

¹⁰ Subsequent history has in fact vindicated the district court's concerns. *U.S. v. Microsoft*, 253 F3d 34 (DC Cir. 2001) cert. den. *U.S.*, 122 S. Ct. 350.

¹¹ It has been suggested that ADM might actually control 55% of existing production capacity. In that case, the level of concentration would be significantly higher (a 55% share is an HHI of 3025; and the post merger HHI would increase by 660 to 3685).

¹² The following market analysis is based on interviews, web materials and newspaper articles available to Professor Carstensen.