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UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT

SPIRIT AIRLINES, INC.,
Plaintiff-Appellant,

v.

NORTHWEST AIRLINES, INC.,
Defendant-Appellee.

No. 03-1521

Appeal from the United States District Court
for the Eastern District of Michigan at Detroit.
No. 00-71535—Gerald E. Rosen, District Judge.

Argued: September 14, 2004

Decided and Filed: November 9, 2005

Before: MOORE and CLAY, Circuit Judges; HAYNES, District Judge.[*]

COUNSEL

ARGUED: Richard A. Arnold, KENNY, NACHWALTER, SEYMOUR, ARNOLD, CRITCHLOW & SPECTOR, Miami, Florida, for Appellant. James P. Denvir, BOIES, SCHILLER & FLEXNER, Washington, D.C., for Appellee. **ON BRIEF:** Richard A. Arnold, William J. Blechman, Kevin J. Murray, KENNY NACHWALTER, SEYMOUR, ARNOLD, CRITCHLOW & SPECTOR, Miami, Florida, for Appellant. James P. Denvir, Alfred P. Levitt, BOIES, SCHILLER & FLEXNER, Washington, D.C., Lawrence G. Campbell, L. Pahl Zinn, DICKINSON WRIGHT, Detroit, Michigan, for Appellee.

HAYNES, D. J., delivered the opinion of the court, in which CLAY, J., joined. MOORE, J. (pp. 32-36), delivered a separate opinion concurring in the judgment.

OPINION

HAYNES, District Judge. Plaintiff Spirit Airlines, Inc. appeals from the district court's final order granting summary judgment to the Defendant Northwest Airlines, Inc. on Plaintiff's claims of monopolization and attempted monopolization under Section 2 of the Sherman Antitrust Act, 15

[*]The Honorable William J. Haynes, Jr., United States District Judge for the Middle District of Tennessee, sitting by designation.

U.S.C. § 2.[1] Spirit alleged that the Northwest engaged in predatory pricing and other predatory tactics in the leisure passenger airline markets for the Detroit-Boston and Detroit-Philadelphia routes. In sum, the district court found that Spirit's proof had not established predatory pricing by Northwest in these markets. Specifically, the district court rejected Spirit's definition of the relevant market as limited to low fare or leisure passengers, and adopted Northwest's market definition of all passengers on these routes. With this conclusion, the district court found that Northwest's total revenues exceeded its total costs for these routes. Moreover, the district court opined that even if the low fare or leisure passenger market were the appropriate market, Northwest's expert proof demonstrated that Northwest's total revenues still exceeded its relevant costs. The district court deemed Spirit's expert proof and analysis of Northwest's costs and revenue to be implausible. Given these conclusions, the district court deemed it unnecessary to decide Spirit's other predatory practices claims.

From our review of the record, when the evidence is considered in a light most favorable to Spirit, as is required in this context, we conclude that a reasonable trier of fact could find that a separate and distinct low-fare or leisure-passenger market existed. The evidence presented by Spirit in support of such a market includes Northwest's own marketing data, the testimony of its marketing officials, the findings of government regulators and Spirit's experts. Moreover, based on the evidence presented, a reasonable trier of fact could find that at the time of predation, Northwest's prices were below its relevant costs for these routes, the market in the two relevant geographic routes was highly concentrated, Northwest possessed overwhelming market share, and the barriers to entry were high. Accordingly, a reasonable trier of fact could conclude that Northwest engaged in predatory pricing in the leisure passenger markets on these two geographic routes in order to force Spirit out of the business. Finally, based on the evidence presented by Spirit's experts, a reasonable trier of fact could find that once Spirit exited the market, Northwest raised its prices to recoup the losses it incurred during the predation period. Accordingly, we reverse the grant of summary judgment in favor of Northwest and remand the case to the district court for further proceedings consistent with this opinion.

A. FACTUAL BACKGROUND[2]

1. The Parties

Spirit started business in Michigan in 1990 as Charter One, a scheduled passenger service. In 1992, Charter One changed its name to Spirit, a low fare carrier with its base of operations in Detroit. In 1992, Spirit had four airplanes servicing four cities with 140,931 passengers, approximately 125 employees and annual revenues of approximately $60 million. Spirit's primary routes were point to point flights between Detroit-Atlantic City and, for a time, Detroit-Boston. By the end of 1993, Spirit had added service to cites in Florida and in 1995, Spirit expanded to other cities. Spirit targeted local leisure or price-sensitive passengers whose travel is generally discretionary, such as passengers visiting friends and relatives, and tourists or vacationers who might not otherwise fly. Spirit's pricing strategy provided a price incentive to such leisure travelers with unrestricted, but non-refundable fares. Spirit's services lacked first class service, frequent flyer benefits, and connecting service. Leisure or low price-sensitive passengers purchase tickets with restrictions on their use, e.g., an advance purchase or stay-over requirement, in exchange for low prices for a particular route.

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[1]During the pendency of this appeal, Northwest filed for bankruptcy. The automatic stay under 11 U.S.C. § 362(a)(1) applies to this appeal. *In re Delta Airlines*, 310 F.3d 953, 956 (6th Cir. 2002). Upon the parties' stipulation, the bankruptcy court entered an order lifting the automatic stay for a decision on Spirit's appeal.

[2]As discussed *infra*, because the district court granted Northwest's motion for summary judgment, under the applicable law, we are required to view the factual record in a light most favorable to Spirit, the non-moving party.

In 1992, Spirit approached the Detroit Metropolitan airport's management about access to additional ticket counters and gates. Because "Northwest had a stranglehold on the gates at Detroit Metro," Spirit's efforts "were futile."(J.A. 1336). Northwest controlled the majority of the gates at the Detroit airport either by lease or secondary rights from other airlines. Spirit cited an internal Northwest memorandum advocating that when Detroit built its new airport, the existing Detroit concourses should be destroyed, so that other carriers would not "benefit from the vacuum which is created once [Northwest] vacates its existing gates" at the old Detroit airport. (J.A. 41).

Spirit was allowed to use gates formerly used by Trump Shuttle and Charter, but could not secure a permanent gate arrangement. Spirit was unsuccessful in its negotiations with US Air Company to use two gates that Northwest subsequently acquired. The district court found that Spirit did secure short term leases from United Airlines and Continental Airlines, but that Spirit expended $100,000 to add its Detroit-Philadelphia flight. Spirit also paid a 25% higher landing fee than airlines that had leases with the Detroit airport authority.

In 1995, Spirit explored expansion of its service between Detroit and other cities, including Boston and Philadelphia. Mark Kahan, Spirit's general counsel, explained that these two major cities have business and leisure travelers. With this model, Spirit expected to attract primarily the price conscious or leisure traveler. Spirit's management considered the Detroit-Philadelphia route a particularly attractive market given its other flights from the Philadelphia airport and the route's potential base of price-sensitive and leisure travelers.

On December 15, 1995, Spirit commenced a single daily non-stop roundtrip flight between Detroit-Philadelphia on an 87-seat DC-9 airplane at a $49 fare with a load factor of 74.3 percent. Spirit soon experienced a higher load factor on the Detroit-Philadelphia route in June, 1996, rising to 88.5 percent from 64.1 percent in January, 1996. On June 28, 1996, Spirit added a second non-stop roundtrip flight for the Detroit-Philadelphia route. On April 15, 1996, Spirit started its Detroit-Boston route with one daily non-stop round trip, initially at fares of $69, $89 and $109.

By 1995, Spirit operated 10 aircraft and serviced 13 travel routes carrying 583,969 passengers and employing approximately 450 people. By 1996, Spirit increased its capacity to 11 aircraft, with 15 routes. In June 1996, Spirit's had 71,364,828 seat miles with annual revenues of $62.9 million and approximately 455 employees.

Northwest was founded in 1926 as an air mail carrier for the Minneapolis to Chicago route. The firm's operations at Minneapolis grew and Northwest developed a hub there. By 1986, Northwest merged with Republic Airlines, which had hubs at Detroit and Memphis. In 1995, Northwest was the fourth largest air passenger carrier in the United States with annual revenues of $9.1 billion from its domestic and international operations. At the Detroit Metro airport, Northwest "controlled" 64 of the airport's 86 gates and had 78 percent of all passenger travel from the Detroit-Metro airport. (J.A. 33).

Northwest operates a hub-and-spoke network with hubs at Detroit, Minneapolis-St. Paul and Memphis. In the hub system, the hub serves as the connecting point for flights between other cities that serve as the "spokes." (J.A.13). In a word, in this system passengers do not begin or end their journey on a single flight. The initial flight is from a spoke airport to the hub and after deplaning, the passenger boards a second flight to the passenger's ultimate destination, another spoke airport. Northwest offers restricted and unrestricted tickets, airport clubs, a frequent flyer benefits, advanced seat selection, first and other classes of service, and on-board meals. Northwest utilizes the yield management policy, which, in essence, seeks "to maximize the revenue that we earn for our domestic network ... and ... try to sell every seat at its highest possible fare." (J.A 1573).

Prior to Spirit's entry, Northwest offered non-stop service on the Detroit-Boston and Detroit-Philadelphia routes. For the Detroit-Philadelphia route, Northwest had a 72% market share. For the Detroit-Boston route, Northwest had an 89% market share. Northwest's only competitor for the service to Philadelphia was US Airways. **(**J.A. 779 and 780). US Airways was the highest cost service provider in the market, (J.A3 479), and Spirit's expert characterized US Airways as a "compliant" competitor of Northwest. (J.A. 3796). Northwest had six daily non-stop roundtrip flights on the Detroit-Philadelphia route and US Airways had four.

2. Northwest Response to Spirit's Entry

Northwest adopted its "New Competitive Equilibrium Analysis" for its response to any new competitor on its routes. (J.A. 3514). In step one of this analysis, Northwest considers the impact of the new entrant's service on Northwest's revenue. *Id.* In step two, Northwest studies whether to add capacity on the route. *Id.* Northwest executive Paul Dailey admits that this analysis is more "art" than "science." (J.A. 1649).

At the time of Spirit's entry, Northwest's lowest unrestricted fare for Detroit-Philadelphia flight was $355 and its lowest restricted fare was $125 each way. US Airways' fares were comparable to Northwest's fares. Initially, neither Northwest nor US Airways reduced its fares nor added capacity after Spirit's entry into the Detroit-Philadelphia route, until Spirit achieved high load factors, e.g., as high as 88% in April 1996. Before Spirit's entry into the Detroit-Boston route, Northwest provided non-stop air passenger service on the Detroit-Boston route, with 8.5 daily round trips; its lowest unrestricted fare was $411 and its lowest restricted fare was $189 each way. Prior to Spirit's entry, Northwest intended to reduce its capacity for the Detroit-Boston route in the summer of 1996 by 13.7%, to 3,238 seats from 3,753 seats.

Effective April 15, 1996, Northwest dramatically reduced its fare on the Detroit-Boston route to $69, offering this lowest fare on all of its flights. Northwest also increased its daily non-stop roundtrip flights on the Detroit-Boston route to 10.5. Prior to Spirit's entry into the market, Northwest's fare had been in excess of $300. On the Detroit-Boston route, 74.5% of Northwest's passengers flew on fares at or below $69. For this route, Northwest passengers fares were less than Spirit's lowest fare on 93.9% of the days during which Spirit flew this route. In July 1996, 74% of Northwest's passengers on the Detroit-Boston route flew on fares at or below $69, but that percentage fell in September, 1996 to 67%. Spirit's monthly average load factors on the Detroit-Boston route during Northwest's price response were 18% (April 1996), 21% (May), 24% (June), 31% (July), 29% (August), 17% (September).

By August 20, 1996, Spirit discontinued its second flight on the Detroit-Boston route. On September 30, 1996, Spirit abandoned its Detroit-Boston route. Northwest resumed its status as the only provider of non-stop service on the route. After Spirit's exit on this route, Northwest increased its fare initially to $271 and later to $461 as its lowest unrestricted fare.

On June 19, 1996, Northwest reduced its lowest fares (including unrestricted) to $49 on all Northwest flights on the Detroit-Philadelphia route. Northwest added a 289-seat DC-10 airplane that had three times Spirit's entire daily capacity on the Detroit-Philadelphia route. From July to September 1996, 40.5% of Northwest's passengers flew on fares at or below $49. By September 1996, 70% of Northwest's passengers flew on fares above $49 on the Detroit-Philadelphia routes and equal to or below $69. In sum, Northwest transported passengers at fares less than Spirit's lowest fare for 92.5% of the days during the predation period.

Spirit's monthly load factors on the Detroit-Philadelphia route were 43% (July 1996), 36% (Aug.), 31% (Sept.). Spirit never flew more than 1,700 passengers per month, while Northwest averaged well over 30,000 passengers per month during the same period. As a result, Spirit's

monthly load factor fell to 31%. Spirit abandoned its Detroit-Philadelphia route on September 19, 1996. On October 28, 1996, Northwest increased its lowest unrestricted fare on the Detroit-Philadelphia route to $279, and by April 20, 1998, increased that fare to $416.

B. PROCEDURAL HISTORY

Spirit filed its Section 2 claims against Northwest for anti-competitive and exclusionary practices, including, but not limited to, predatory pricing. Spirit's complaint alleged, in pertinent part:

> As part of this unlawful scheme, and as explained more fully below, *Northwest targeted certain of the routes on which it and Spirit competed and substantially increased capacity and began pricing below Northwest's average variable cost or* its average total cost. Further, as part of its unlawful scheme, *Northwest hampered Spirit's ability to compete at Detroit by denying Spirit access to unused gates controlled by Northwest and/or charging Spirit unreasonable and discriminatory prices to use those gates*, and upon information and belief, threatening to eliminate or eliminating discounts, promotions or other benefits to companies in the greater Detroit metropolitan area if those companies designated a carrier other than Northwest for service to or from Detroit . . .
>
> The combination of very low prices and very high capacity on the Detroit-Boston route caused Northwest's revenues on that city pair to go into a free fall . . .
>
> *At that time, Northwest dramatically lowered its fares, matching Spirit's $49 one-way fare, and increased capacity on the city pair . . .*
>
> *Northwest's one-two punch against Spirit in the Detroit-Boston and Detroit-Philadelphia markets produced the result Northwest intended when, by that start of the fourth quarter of 1996, Spirit was forced to abandon service in both city pairs*.

Joint Appendix at 19 and 20. (emphasis added).

Upon completion of discovery, Northwest moved for summary judgment, contending, in sum, that the evidence showed: (1) that the relevant service or product market included local and connecting passengers through the Detroit airport on the Detroit-Boston and Detroit-Philadelphia routes; (2) that at all relevant times, Northwest's revenues exceeded its average variable costs on these routes; (3) that even if Spirit's proposed market of price-sensitive or leisure travelers market were appropriate, Northwest's total revenues on these routes still exceeded its relevant costs; and (4) that Northwest's low price strategy was a pro-competitive response to Spirit's entry into these geographic markets.

In its response, Spirit relied upon its experts, who opined on the definitions of the relevant geographic and service markets, the anticompetitive characteristics of this market, the determination of the appropriate measure of Northwest's costs and the likelihood of recoupment based upon the factual record. In essence, Spirit's proof was that the relevant product or service market is the low price or price-sensitive or leisure fare travelers for the Detroit-Boston and Detroit-Philadelphia routes, the undisputed geographic markets. In Spirit's experts' opinions, the appropriate measure of costs is Northwest's incremental costs for providing the additional capacity to divert these passengers from Spirit on these routes. By these standards, Spirit's experts opined that Northwest's prices on these routes were below its average variable costs. Spirit's expert proof was that within months after Spirit's exit from these markets, Northwest successfully and completely recouped its losses with substantially higher fares and reduced capacity on these routes.

In addition, Spirit cited Northwest's high market share of enplanements at the Detroit airport, Northwest's expansion of its capacity on these routes in response to Spirit's entry, and the significant barriers to entry in this market, as enabling Northwest to engage in a successful predatory campaign to drive Spirit from this market and to recoup its lost revenues from its predatory pricing on these routes. As the competitive injury from Northwest's predation, Spirit cited the significant reduction in the number of leisure travelers on these routes who lost the competitive option of low price travel from the Detroit airport to these cities and who paid substantially higher prices to travel these routes after Spirit's exit from this market.

In its ruling, the district court adopted Northwest's definition of the relevant product or services market and found that Northwest's revenues exceeded its costs on these routes. The district court rejected Spirit's definition of the relevant service market, but concluded that even in that market, Northwest's revenues exceeded its costs on these routes. As the district court summarized:

> [T]he brute market facts established that Northwest's fares did not fall below the airline's average variable costs, and [] Spirit has not produced sufficient facts or identified pertinent legal authority to validate its experts' opinion that below-cost pricing occurred in some alternative, legally relevant "lowest fare" or "price-sensitive" market.
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> * * *
>
> The law governing claims of predatory pricing . . . as explicated in *Brooke Group* and endorsed by scholars including Spirit's own experts, deliberately eschews any qualitative judgments about the competitive desirability of one business practice verses another. The sole and objective benchmark is whether the alleged predator's prices exceed its costs, by reference to the products it actually sells and the markets in which it actually competes with the alleged victim of predation. Under this standard, the record compels the conclusion that Northwest's prices were not predatory, because the airline operated profitably on both the Detroit-Boston and Detroit-Philadelphia routes during the entire period of alleged predation. Consequently, Spirit having failed as a matter of law to establish the first prong of the *Brooke Group* standard, Northwest is entitled to summary judgment in its favor on Spirit's claims of predatory pricing.

(J.A. 79, 80).

As to Spirit's remaining Section 2 claims, the district court deemed consideration of them unnecessary given its conclusion about predatory pricing, as Spirit conceded.

> Given this conclusion, the Court need not address Northwest's two remaining arguments in support of its motion . . .
>
> This leaves only the question whether anything remains of Spirit's claims in this case. As noted at the outset, Spirit alleges that Northwest engaged in other forms of anticompetitive conduct apart from predatory pricing, but the parties' current round of submissions addresses only the latter theory of recovery. To resolve this uncertainty, the Court invited the parties at the December 12 hearing to submit statements of the remaining issues in this case in the event that Northwest's summary judgment motion were granted. In its submission, Spirit maintains that portions of its claims for damages and injunctive relief would remain viable even in the face of such an adverse ruling. Nonetheless, Spirit then states that these "remaining portions, unaccompanied by Northwest's act of predatory pricing, do not warrant the time, money and resources necessarily involved with the prosecution of the

> remaining portions of the federal antitrust action." (Plaintiff's Post-Hearing Statement of What Remains at 3). Consequently, the Court's award of summary judgment to Northwest leaves nothing further to resolve in this case.

(J.A. 80, 81 at n. 29).

C. THE SUMMARY JUDGMENT RECORD

1. Market Characteristics of the Passenger Airline Industry

The proof before the district court included a Department of Transportation study finding that "low-fare air carriers provide important service and competitive benefits: fare levels are much lower and traffic levels are higher, on routes served by low-fare airlines." (J.A. 1388). Spirit's expert's analysis revealed that low fare carriers significantly reduce the fares of major carriers: "[i]n markets that do involve dominated hubs, low-cost service results in average one way fare savings of $70 per passenger, or 40 percent." (J.A. 876, n. 4 quoting the U.S. Department of Transportation, *The Low Cost Airline Service Revolution*, April , 1996 at p. 9). The record also includes a study, "Predatory Pricing in the U.S. Airline Industry" by Clinton V. Oster of Indiana University and John S. Strong of the College of William and Mary. The Oster-Strong study notes that in 1590 markets "the number of passengers traveling increased dramatically in response to the large number of seats offered at low fares." (J.A. 2591).

The Oster-Strong study also reflects that there are "Multiple Competitive Tools" in this industry that provide price and non-price bases for competition among airlines.

> *Multiple Competitive Tools*. While the fare a passenger pays is an important element of competition, *airlines don't compete solely on the basis of the price of the ticket. Instead, they compete over multiple dimensions including: the ticket price; the number of flights a day and the timing of those flights; the characteristics of the flight itinerary such as whether the flight is nonstop, continuing single-plane service, or connecting service; rebates to the traveler in the form of frequent flier programs or corporate discounts; in-flight amenities including food service and how closely the seats are spaced together; ground amenities including club lounges; and so forth*. Airlines can also compete by paying travel agent commission overrides (TACOs), to encourage travel agents to book passengers on their flights rather than those of a competitor. To focus only on a single dimension may miss the full range of the ways in which airlines can compete with one another, particularly if price and cost are narrowly defined.
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> * * *
>
> Airlines can offer different fares on a given flight, attaching restrictions or conditions of travel to some fares and, most importantly, offering only a limited number of seats in some fare categories. . . [A]n example of the coach/economy class fares with associated types of restrictions [is] offered by United Airlines for its flights 1956 from Denver to Miami for travel in January 2001. For this travel, United offered 6 different coach fares ranging from the lowest fare of $483 to the highest fare of $1,045.
>
> These multiple fares give an airline considerable flexibility in how to price seats on its flights. *The airline could, for example, offer service at low average fares by simply making a large number of seats available in the lower fare categories, as Northwest did in the third quarter of 1996 in the Detroit to Philadelphia market*. Conversely, if there is sufficient demand and no meaningful competition, the airline

> can offer most of its service at high average fares by making few or no seats available in the lower fare categories.
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> * * *
>
> However, the presence of a low-fare carrier such as Southwest reduces an airline's ability to extract high fares from travelers.
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> * * *
>
> The entry of a low-fare carrier dramatically shifts the distribution of fares away from the higher fare classes toward the lower fare classes. The result is that the average fare fell from about $173 to about $115. Some high fares still remain after low-fare entry, but a much smaller proportion of travelers pay them. There are still tickets sold in all of the fare categories after low-fare entry, as was the case before entry, but the proportion of tickets sold in each of these categories has changed dramatically.

(J.A. 2589, 2590, 2591). (emphasis added).

In the airline industry, access to gates is critical, but access is not determined by open competition and, for a new entrant, gate access is a substantial barrier to entry. Professor Kenneth Elzinga, one of Spirit's experts quoted one analyst who summarized this aspect of the market.

> While route schedules and pricing for the airline industry have been largely deregulated for over 20 years, many other aspects of the industry are still highly regulated. Perhaps the most important regulation comes from local governments, which own and manage the airports in their region and therefore control key bottlenecks to airport service: access to boarding gates and runways. Most local airport commissions allocate gates without a formal market mechanism . . .

(J.A. 797). (quoting Gautam Gowrisankaran, "Competition and Regulation in the Airline Industry," *Federal Reserve Board of San Francisco Economic Letter*, Number 2002-01, p. 1). Professor Elzinga's report shows that the majority of airport gates are controlled by long-term exclusive-use leases with the local airport authority. In 1996, the GAO found that 76 of the 86 gates at the Detroit airport were covered by long term leases until 2008 and Northwest had 64 of such leases.

Michael Levine, one of Northwest's experts in Northwest's action against American Airlines for predatory pricing opined that: "The Barriers to Entry in Those Relevant Hub, Hub-Network, Regional and National Markets Are Very High. The Barriers to Entry in Hub-to-Hub **C**ity Pairs Are Also Very High. Barriers to Entry in Certain City Pairs Are Also High." (J.A. 926). In that action, Levine also stated that "[n]ew entrants are facing a higher cost of entry than even existing competitors have incurred." (J.A. 928). "Existing [airlines] obtained their initial awareness and facilities base pursuant to government regulations that protected them from competition." (J.A. 928).

Professor Keith B. Leffer, another Spirit expert, is an Associate Professor of Economics at the University of Washington who teaches and researches in the areas of industrial organization, antitrust economics and the economics of contracts. Professor Leffer analyzed Northwest's experts' reports in Northwest's action against American Airlines for predatory pricing. Professor Leffer found that in those reports, Northwest's experts opined that:

> b. predatory pricing can be a rational economic strategy in the airline industry;

c. recoupment from predatory pricing is likely for an airline dominant in a relevant economic market in the airline industry;

d. there are substantial barriers to entry into the airline industry;

f. the measure of the average variable cost in the airline industry should include the cost of changing capacity.

J.A. 893-94.

2. Market Power

At the time of Spirit's entry into these geographic routes in 1995, Northwest had 78% of all passengers traveling from the Detroit Metro airport and 64 of 78 gates at the Detroit airport. During 1996, Northwest's share of the air passenger traveler market at its Minneapolis hubs was 75 to 80% of all enplanements and about 65 to70% at its Memphis hub. Northwest's share of local passengers on the Detroit-Philadelphia route was between 60-75% of flown seats. Prior to Spirit's entry into the Detroit-Philadelphia market, Northwest carried about 70% of the non-stop traffic on this route, and offered six daily flights; US Airways was a distant second with a market share of about 27%. Prior to Spirit's entry, Northwest was the prime carrier on the Detroit-Boston route and had an 89% market share for that route. After Spirit's exit, Northwest resumed its status as the only supplier of local passenger service on the Detroit-Boston route

After his review of these markets, Professor Elzinga concluded that Northwest possessed sufficient market power on the Detroit-Boston and Detroit-Philadelphia routes "to make predatory pricing plausible." (J.A. 3796). In Professor Elzinga's view, Northwest's match of Spirit's fares for a large number of its passengers who are price sensitive reflected Northwest's ability to engage in price discrimination by charging higher fares to passengers who are unlikely to travel on Spirit, e.g., businesses travelers, even at substantially lower prices.

3. The Relevant Market

As discussed in more detail *infra*, the factual record reflects that Northwest's internal documents and its marketing representatives recognize the "low price or price sensitive traveler" or "leisure traveler" as a distinct and relevant market in the air passenger travel market. After a review of this market, Spirit's experts found that a leisure travel passenger or price-sensitive market exists and cited this market as the focus of the actual competition between Spirit and Northwest. Two federal regulators studied this market and also found a distinct market for low fare or price sensitive or leisure travelers.

4. Northwest's Strategy

Aside from the market issues, Spirit's proof reflects that Northwest's Chief Executive Officer deemed the Detroit Metro Airport to be Northwest's "most unique strategic asset" that must be protected "at almost all cost." (J.A. 2396 and 2399). Northwest studied low fare carriers and estimated that competing with such airlines could cost Northwest $250-$375 million in annual revenue at its hubs. This study expressly identified Spirit as one such low cost carrier. *Id.*

In addition, Michael Levine, Northwest's Executive Vice President, published an article[3] in 1987 describing a two-fold strategy to respond to low fare carriers. This strategy, entitled the "new competitive equilibrium analysis," addresses the impact of a new entrant's service in this market.

[3]Levine, Airline Competition In Deregulated Markets, 4 Yale J. of Reg. 393, 476-78 (1987).

"The essence of the strategy is simple. Match, or better yet, beat the new entrant's lowest restricted fare to confine its attractiveness to the leisure oriented price-sensitive sector of the market . . . Make sure enough seats are available on your flights in the market to accommodate increases in traffic caused by the fare war. In short, leave no traveler with either a price or a schedule incentive to fly the new entrant." (J.A. 2549). Significantly, Levine states: "The incumbent will not operate profitably under such conditions especially, if, as is usually the case, it is a higher-cost airline than its competitor." *Id.*

In its comprehensive study of the industry, the United States Department of Transportation concluded that "Northwest's response forced Spirit's exit from this market and was designed to do so." (J.A. 1406).

5. Recoupment

On the issue of recoupment, Professor David Mills, a Spirit expert, describes the predator's view of below cost pricing as "an investment strategy" that is the core of Elzinga - Mills recoupment test for predatory pricing. Under this test "[t]he proper benchmark to use in calculating the predator's reasonably expected gains and losses is the profit the firm would earn if the target remained in the market." (J.A. 3166). To determine predation, "[t]he first task is to compare Northwest's average fares during the months when Spirit operated its flights on the [Detroit-Boston] route to the average fares that would have prevailed on the route, but for Northwest's alleged predation." (J.A. 3169). This factor "measure[s] the monthly financial sacrifice the airline shouldered by charging prices below the otherwise prevailing level." *Id.* "The second task . . . compares the average fares Northwest would expect to charge, during the months immediately after Spirit exited the market, to the average fares that otherwise would have prevailed in the market." *Id.* This second factor "measure[s] the monthly financial return Northwest could achieve by driving Spirit from the market with its predatory pricing." *Id.* The third factor "compare[s] the anticipated monthly sacrifice during predation with the anticipated monthly return during recoupment to understand whether predatory pricing plausibly would have been a profitable option for Northwest to exercise." (J.A. 3170).

Considering the evidence on market characteristics in this industry, and applying a number of mathematical formulae to these facts, Professor Mills concluded, in sum, that Northwest had successfully recouped its lost revenue within months after Spirit's departure from these routes.

6. Northwest's Non-Price Predatory Practices

Professor Elzinga also deemed Northwest's combination of its matching Spirit's lower prices and its expansion of its flight capacity on these routes as the keys to Northwest's successful predation against Spirit. Professor Daniel Kaplan, a Spirit expert, also challenged Northwest's strategy for the Detroit-Boston route. For example, to justify the addition of the DC- 10, Northwest's analysts arbitrarily assumed a 362% increase in passenger traffic in Detroit-Boston upon Spirit's entry that is wholly contrary to Northwest's price-out model forecast for these flights.

D. STANDARD OF REVIEW

We review the district court's order granting Northwest's motion for summary judgment *de novo*. *American Council of Certified Podiatric Physicians and Surgeons v. American Board of Podiatric Surgery*, 185 F.3d 606, 619 (6th Cir. 1999). We "must also consider all facts in the light most favorable to the non-movant and must give the non-movant the benefit of every reasonable inference." *Id.* The moving party's burden is to show "clearly and convincingly" the absence of any genuine issues of material fact. *Sims v. Memphis Processors, Inc.*, 926 F.2d 524, 526 (6th Cir. 1991) (quoting *Kochins v Linden-Alimack, Inc.*, 799 F.2d 1182, 1183 (6th Cir. 1986)).

The District Court construed the Supreme Court's trilogy of *Matsushita*, *Anderson*, and *Celotex* to have "in the aggregate, lowered the movant's burden in seeking summary judgment." (J.A. 44). We respectfully disagree. The Supreme Court observed that summary judgment is appropriate where the antitrust claim "simply makes no economic sense," *Eastman Kodak Co. v. Image Tech. Sèrvs., Inc.*, 504 U.S. 451, 467 (1992), or "[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party . . .". *Matsushita Elect. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986) (citations omitted). The Supreme Court "has preferred to resolve antitrust claims on a case-by-case basis, focusing on the 'particular facts disclosed by the record.'" *Eastman Kodak Co.*, 504 U.S. at 467 (quoting *Maple Flooring Mfrs. Ass'n. v. United States*, 268 U.S. 563, 579 (1925)). Moreover, as the Supreme Court explained, *Matsushita* does not increase the non-movant's burden on a motion for summary judgment. "*Matsushita* demands only that the nonmoving party's inferences be reasonable in order to reach a jury. . .". *Kodak*, 504 U.S. at 468.

Later, the Supreme Court noted: **"**In certain situations--for example, where the market is highly diffuse and competitive, or where new entry is easy, or the defendant lacks adequate excess capacity to absorb the market shares of his rivals and cannot quickly create or purchase new capacity--summary disposition of the case is appropriate." *Brooke Group Ltd. v. Brown* and *Williamson Tobacco Group*, 509 U.S. 209, 226 (1993). A corollary of this principle of *Brooke Group*, is that where the market is highly concentrated, the barriers to entry are high, the defendant has market power and excess capacity, and evidence of actual recoupment is present, summary judgment is inappropriate.

In a Section 2 action, we observed that, "only a thorough analysis of each fact situation will reveal whether the monopolist's conduct is unreasonably anti-competitive and thus unlawful." *Byars v. Bluff City News Co.*, 609 F.2d 843, 860 (6th Cir. 1979) (citations omitted). Our precedents hold that if the opposing party's expert provides a reliable and reasonable opinion with factual support, summary judgment is inappropriate. See e.g., *Rodgers v. Monumental Life Ins. Co.*, 289 F.3d 442,448 (6th Cir. 2002) (reversing an order granting summary judgment where plaintiff's expert opinion was deemed reasonable).

As discussed in more detail *infra*, we conclude that when the evidence is considered in a light most favorable to Spirit, a reasonable trier of fact could find that in the relevant geographic and service markets, the markets were highly concentrated, Northwest possessed overwhelming market share, and the barriers to entry were very high. As a result, a reasonable trier of fact could conclude that by dropping its prices below its costs as well as by quickly expanding capacity, Northwest engaged in anti-competitive conduct aimed at driving Spirit out of the relevant markets. Moreover, based on the evidence presented by Spirit's experts, a reasonable trier of fact could conclude that following Spirit's exit, Northwest recouped its losses incurred during the predation period. Accordingly, we conclude that Spirit has presented sufficient evidence of predatory pricing to withstand summary judgment in this case.

E. LEGAL ANALYSIS

Section 2 of the Sherman Act, in pertinent part, makes it unlawful to "monopolize, or attempt to monopolize, . . .any part of the trade or commerce among the several States . . .". 15 U.S.C. § 2. "[Section] 2 addresses the actions of single firms that monopolize or attempt to monopolize . . . The purpose of the Act is not to protect businesses from the working of the market; it is to protect the public from the failure of the market." *Spectrum Sports Inc. v. McQuillan*, 506 U.S. 447, 454, 458 (1993). Under this statute, the defendant must "use . . . monopoly power 'to foreclose competition, to gain a competitive advantage, or to destroy a competitor.'" *Eastman Kodak*, 504 U.S. at 482-83 (quoting *United States v. Griffith*, 334 U.S. 100, 107 (1948))

We must decide whether Spirit has presented sufficient evidence that Northwest engaged in predatory pricing to withstand summary judgment in this case. Within that general question are several issues of what a reasonable trier of fact could find, such as whether leisure travelers constitute a distinct market in this industry; whether Northwest possessed sufficient market power to engage in predatory pricing; whether Northwest's prices in response to Spirit's entry were below an appropriate measure of its costs; whether Northwest recouped its lost profits from its reduced prices; and whether the characteristics of this market would facilitate and render economically plausible Spirit's assertion of Northwest's predatory pricing. On each issue, summary judgment principles require us to view the evidence in a light most favorable to Spirit.

As to the merits of Spirit's Section 2 claims, in *Conwood Co., L.P. v. U.S. Tobacco Co.*, 290 F.3d 768 (6th Cir. 2002) we summarized the requisite proof for monopolization and attempted monopolization claims:

> A claim under § 2 of the Sherman Act requires proof of two elements: (1) the possession of monopoly power in a relevant market; and (2) the willful acquisition, maintenance, or use of that power by anti-competitive or exclusionary means as opposed to "growth or development resulting from a superior product, business acumen, or historic accident." *Aspen Skiing Co. v. Aspen Highlands Skiing Corp*, 472 U.S. 585, 595-96 (1985) . . . "An attempted monopolization [under § 2] occurs when a competitor, with a dangerous probability of success, engages in anti-competitive practices the specific design of which are, to build a monopoly or exclude or destroy competition." *Smith v. N. Michigan Hosp. Inc.*, 703 F.2d 942, 954 (6th Cir. 1983) (citations and internal quotation marks omitted) . . . Moreover, in order for a completed monopolization claim to succeed, the plaintiff must prove a general intent on the part of the monopolist to exclude; while by contrast, to prevail on a "mere" attempt claim, the plaintiff must prove a specific intent to "destroy competition or build a monopoly." *Tops Markets, Inc. v. Quality Markets, Inc.*, 142 F.3d 90, 101 (2d Cir. 1998). However, "no monopolist monopolizes unconscious of what he is doing." *Aspen*, 472 U.S. at 602. Thus, "[i]mproper exclusion (exclusion not the result of superior efficiency) is always deliberately intended." *Id.* at 603 (citation omitted).

Id. at 782.

1. Relevant Markets

a. Geographic Market

The threshold issue under Section 2 is the definition of "the relevant product and geographic markets in which [plaintiff] competes with the alleged monopolizer, and with respect to the monopolization claim, to show that the defendant, in fact, possesses monopoly power." *Id.* (citation omitted). "A geographic market is defined as an area of effective competition" or "the locale in which consumers of a product or service can turn for alternative sources of supply." *Id.* (quoting *Re/ Max Intern., Inc v. Realty One, Inc.*, 173 F.3d 995, 1016 (6th Cir. 1999)). The Sherman Act governs "localized geographic area(s)" and "the relevant geographic submarkets [based upon] commercially significant areas in which the defendant operated and in which [the defendant's] customers could turn to other suppliers." *United States v. Dairymen, Inc.*, 660 F.2d 192, 195 (6th Cir. 1981) (quoting *International Boxing Club of New York, Inc. v. United States*, 358 U.S. 242, 251 (1959) and citing *Tampa Electric Co. v. Nashville Cola Co.*, 365 U.S. 320, 327 (1961)).

The district court's opinion, the parties' agreement and the proof reflects that the relevant geographic markets are the Detroit-Boston and Detroit Philadelphia routes. Spirit's expert cited an

industry study to the effect that in the passenger airline industry, "[a]t its most basic level, the unit of output of a passenger airline is transportation of passengers between cities." (J.A. 775). "[T]he airline industry is a multiple-product industry producing and selling thousands of different product - travel between city pairs . . . It is at the route level, after all, that airlines actually compete with one another." *Id.* According to the Transportation Research Board of the National Research Council, "[a]irlines compete for passengers at the city-pair level. There are thousands of combinations of origin and destination (O-D) points that constitute the market for our transportation system . . .". (J.A. 776). In its report, the General Accounting Office stated "that city-pairs can also be used to analyze various air markets." *Id.*

b. Relevant Service Market

As to product or service market, in *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962), the Supreme Court emphasized that a product market may have submarkets and the definition of a market or submarket focuses on economic realities and industry practice. "The boundaries of . . . *a (product) submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity*, the products' peculiar characteristics and uses, unique production facilities, *distinct customers, distinct prices, sensitivity to price changes, and specialized vendors*." *Id.* (emphasis added).

In *White & White, Inc. v. American Hosp. Supply Corp.*, 723 F.2d 495, 500 (6th Cir. 1983), we identified the "reasonable interchangeability"standard as a method for defining the relevant product or service market. We observed that: "The *DuPont* Court noted that reasonable interchangeability may be gauged by (1) the product uses, i.e., whether the substitute products or services can perform the same function, and/or (2) *consumer response (cross-elasticity); that is, consumer sensitivity to price levels at which they elect substitutes for the defendant's product or service*." *Id.* (emphasis added and citing *United States v. E.I. DuPont de Nemours & Co.*, 351 U.S. 377 (1956) and *United States v. Grinnell Corp.*, 384 U.S. 563 (1966).)

The district court adopted Northwest's position that the relevant product or service market includes "local" passengers who travel from Detroit on these non-stop flights to either Detroit or Boston and "connecting" passengers from other Northwest flights who travel to these cities from the Detroit airport**.** Based on the proof here, a reasonable trier of fact could find that Spirit and Northwest both recognize "leisure" or "discretionary" or "price-sensitive" passengers as a distinct market in the air passenger travel market.

For example, during relevant period, Northwest had separate fares for business travelers and leisure travelers. Northwest's internal documents on pricing and passenger fares reflect Northwest's distinction between business and leisure travel. A Northwest internal document states that its "FARE RESTRICTIONS ATTEMPT SEGMENTATION" and that "Restrictions are designed to make passengers reveal their own demand". (J.A. 4182). Michael Gerend, Northwest's manager for domestic pricing responded to the following question: "Q: Did the Pricing Department make distinctions between business and leisure products? A. Yes." **"**Q. Do you view the business market and the leisure market as separate markets? A. Yes." (J.A. 4171). Kenneth Pomerantz, Northwest's director of sales, development, and analysis answered a similar question:"Q: Are they considered two different markets, business travel and leisure travel? A: I believe they are considered different products." (J.A. 4173-74).

Northwest filed an action against American Airlines for predatory pricing and in that action Northwest's experts recognized that "business travelers constitute a distinct market segment in the airline industry." (J.A. 893, 894). In his expert report for that action, Michael Levine, now a Northwest executive, opined "that there were at least two relevant product market segments in which airlines compete: business and discretionary and leisure travel." (J.A. 1701). John T. Griffin,

another witness in Northwest's action against American Airlines stated: "There's nothing that necessarily links business fares and leisure fares. We really have treated those as distinct. And within the objective of attempting to maximize my business revenue and the leisure revenue separately." (J.A. 4207).

In Northwest's comment on the proposed enforcement policy of the United States Transportation Department, Dr. Laura D'Andrea Tyson presented a paper for Northwest entitled, "Competition in the Airline Industry: A Response to the Department of Transportation's Proposed Enforcement Policy". (J.A. 4199-4205). In pertinent part, Dr. Tyson stated: "*Airlines have different products on the same airplane that offer customers different characteristics and thus cover a wide range of prices* . . . All airline seats on a particular flight provide transportation between the two airports served by that flight, but *it is not accurate to say, even within a specific class, that these seats provide the same service or have the same cost*." (J.A. 4202). (emphasis added).

To study this market, Spirit retained Professor Kenneth G. Elzinga, a highly regarded economist.[4] Professor Elzinga is a Professor of Economics at the University of Virginia. Among his prior experiences are as an economist in the United States Department of Justice and as consultant to the Federal Trade Commission. Professor Elzinga's publications on antitrust economics, include writings on predatory pricing, and as noted below, his writings have been cited by the United States Supreme Court in its predatory pricing opinions. Professor Elzinga also served as a special consultant to the Honorable Lewis D. Kaplan in a complex antitrust action.

After his study, Professor Elzinga opined that a distinct product or service market existed. "The relevant market for air travel consists of all local passengers whose itineraries originate in a particular city and terminate in another; in other words, relevant markets consist of passenger service between city-pairs. In this litigation, the two markets are the city pairs of Detroit and Boston and Detroit and Philadelphia." (J.A. 773-74). Although Professor Elzinga's market definition is not expressly limited to price-sensitive passengers, clearly Professor Elzinga's cost-comparison is so limited. In Professor Elzinga's analysis of the cost-revenue comparison, the relevant passengers in this market are low fare passengers. (J.A. 793-96). Based on the evidence presented by Spirit, including Northwest's own documents, the testimony of its officials, and the opinions of Spirit's experts, we conclude that a reasonable trier of fact could find that leisure or price-sensitive passengers represent a separate and distinct market in this industry for Section 2 purposes.

2. Monopoly Power

As to whether Northwest possessed monopoly power in this market, the Supreme Court's formulations of monopoly power are "the ability of a single seller to raise price and restrict output," *Eastman Kodak* , 504 U.S. at 464 (quoting *Fortner Enterprises, Inc. v. United States Steel Corp.*, 394 U.S. 495, 503 (1969) or the power to "control prices or exclude competition," *United States v. E.I. du Pont Nemours & Co.*, 351 U.S. 377, 391 (1956). "[A]s an economic matter, market power exists whenever prices can be raised above the levels that would be charged in a competitive market." *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 27 n. 46 (1984). We described monopoly power as the defendant's power "to raise prices or to exclude competition when it is desired to do so." *Byars*, 609 F.2d at 850 (quoting *American Tobacco Co. v. United States*, 147 F.2d 93, 112 (6th Cir. 1944), *aff'd*, 328 U.S. 781 (1946).).

[4]Spirit's experts, Professors Kenneth Elzinga and David Mills have authored economic studies on predation that have been cited by the United States Supreme Court in its antitrust decisions on predatory pricing. *Brooke Group Ltd. v. Brown & Williamson Tobacco Corn.*, 509 U.S. 209, 226 (1993); *Texas Indus., Inc. v. Radcliff Materials. Inc.*, 451 U.S. 630, 637 n.8 (1981); *Ford Motor Co. v. United States*, 405 U.S. 562, 582 (1972). See also Mills and Elzinga, "Testing for Predation: Is Recoupment Feasible," 34 Antitrust Bulletin 868 (1989). Spirit's other experts and Northwest's experts are also eminently qualified.

"The existence of such power ordinarily is inferred from the seller's possession of a predominant share of the market." *Eastman Kodak*, 504 U.S. at 464. Judge Learned Hand enunciated what has become the classic explanation of when market share becomes large enough to constitute a monopoly: "over ninety . . . percentage is enough to constitute a monopoly; it is doubtful whether sixty or sixty-four percent would be enough; and certainly thirty-three percent is not." *United States v. Aluminum Co. of America*, 148 F.2d 416, 424 (2nd Cir. 1945). In *Eastman Kodak*, the Court cited its earlier precedent that possession of "over two-thirds of the market is a monopoly." 504 U.S. at 481 (citing *American Tobacco Co. v. United States*, 328 U.S. 781, 797 (1946).).

As applied here, when Spirit entered the Detroit-Boston and Detroit-Philadelphia markets, Northwest was the dominant carrier in each market. At the time of Spirit's entry, Northwest had an 89% market share and became the sole provider on the Detroit-Boston route. Northwest had more than a 70% market share on the Detroit-Philadelphia route. Prior to Spirit's entry, Northwest competed with only one other carrier, US Airways, for non-stop service on the Detroit-Philadelphia route. Northwest had 78% of all passengers traveling from the Detroit airport and controlled 64 of the 78 gates at the Detroit airport under long-term leases. Once Spirit left this market, Northwest reduced the number of flights on these routes, restricting output, and increased its fares on these routes significantly. These two measures could reasonably be interpreted as a clear exercise of monopoly power. Professor Elzinga deemed the facts here to establish that Northwest had the requisite market power to render its predatory pricing plausible and successful. We conclude that a reasonable trier of fact could find that Professor Elzinga's opinion is a reasonable economic conclusion based upon the proof.

In evaluating the economic reasonableness of Professor Elzinga's conclusion, we note commentators' views, as the Supreme Court commonly does, and as the district court did below. As to requisite power to engage in successful predatory pricing, Jonathan Baker, a former Senior Economist at the Council of Economic Advisers and an economist in the United States Department of Justice opined that "If imperfections in the market for capital cause the prey to have less access to financial capital than the predator, then the predator may reasonably expect to use its 'deep pockets' in the traditional way to drive the prey to exit. In addition, if high prices following the exit of the prey are unlikely to be eroded by new competition (because of entry barriers), predatory pricing with single market recoupment may no longer be an irrational strategy. . . . A firm can deter aggressive competition with a low price, even if the low price exceeds the price-cutter's average cost, so long as the price is sufficiently low relative to its rivals' cost. Hence, it is possible that competition can be harmed by low prices even if those prices are not below the price-cutter's cost." Jonathan Baker, "Predatory Pricing after *Brooke Group*; An Economic Perspective" 62 Antitrust L.J. 585, 591 (1994). In his article "Predation, Competition & Antitrust Law: Turbulence In The Airline Industry" 67 J. Air. L. & Com. 685, 702 (2002), Professor Paul Stephen Dempsey, a former airline executive and Professor of Law and Director of the Air and Space Law at McGill University noted that: "new entry cannot be sustained where the incumbent airline is willing to endure significant short-term losses in a below-cost predatory pricing strategy designed to force the new entrant out of the market (or into bankruptcy) so that after the new entrant leaves, the incumbent can resume its monopoly price gouging well above competitive levels."[5]

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[5]Professor Dempsey's research touched on the issues in this action, quoting Northwest's Michael Levine that "I believe predation is possible and that it occurs . . . [I]t is possible for an incumbent to impose on prospective entrants nonrecoverable costs by pricing in a way that seeks to ensure that they do not attract a significant share of passengers regardless of the incumbent's own cost." *Id.* at 708. Professor Dempsey cites Dr. Alfred Kahn who described Northwest as having a 'scorched-earth' policy in which Northwest drove another low fare carrier People Express out of the market by substantially undercutting People Express's price while simultaneously increasing the number of flights in the market: "If predation means anything, it means deep, pinpointed, discriminatory price cut by big companies aimed at driving price cutters out of the market, in order then to be able to raise price back to their previous levels. I have little doubt that

According to Professor Dempsey, "[w]hen a less-well-capitalized, younger, low-cost, new entrant airline attempts to enter, the competitive response is predatory, with the intent of driving the new entrant out of the market." *Id.* at 735. Chronologically, the predation process is as follows:

1. Major airline establishes dominance at airport serving competitive levels.

2. Dominance allows major airline to price well above competitive levels.

3. When a new entrant attempts to enter a major airline's hub, dominant airline responds with below-cost pricing, capacity dumping, and/or a number of other predatory practices until the new entrant is driven out.

4. Once the new entrant is driven out of the market, dominant airlines raises prices to levels sometimes higher than those prevailing before the new entrant attempted entry.

Id.

These commentators' views of this market and Northwest's conduct within it are consistent with the opinions of Spirit's economic experts and further confirm our conclusion that a reasonable trier of fact could find that Northwest possessed the requisite market power to engage in its predatory conduct and that Northwest successfully used it.

3. The Appropriate Measure of Costs

The next step is to determine the appropriate measure of Northwest's costs to determine if Northwest's response to Spirit's entry pricing were predatory. Under § 2 of the Sherman Act, "a plaintiff seeking to establish competitive injury resulting from a rival's low prices must prove that the prices complained of are below an appropriate measure of its rival's costs." *Brooke Group*, 509 U.S. at 222 (citations omitted). In *Brooke Group*, the Supreme Court declined to resolve the conflict among the circuits over the appropriate measure of costs, but utilized the average variable cost standard "[b]ecause the parties in this case agree the relevant measure is average variable cost." *Id.* at 223, n. 1.

In *Brooke Group*, the Supreme Court explained that "we have rejected elsewhere the notion that above-cost prices that are below general market levels or the costs of a firm's competitors inflict injury to competition cognizable under the antitrust laws. 'Low prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition.... We have adhered to this principle regardless of the type of antitrust claim involved.'" 509 U.S. at 223. (quoting and citing *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328 (1990)). This principle applies to pricing "even to predatory pricing by a firm *seeking* monopoly power" *Matsushita*, 475 U.S. at 590; (emphasis added); "[e]ven in an oligopolistic market, when a firm drops its prices to a competitive level to demonstrate to a maverick the unprofitability of straying from the group . . ."; and "[e]ven if the ultimate effect of the cut is to induce or reestablish supracompetitive pricing, discouraging a price cut and forcing firms to maintain supracompetitive prices, thus depriving consumers of the benefits of lower prices in the interim." *Brooke Group*, 509 U.S. at 223-24. Successful predatory pricing is "inherently uncertain: the short run loss is definite,

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is what Northwest was and is trying to do" *Id.* See also Russell A. Klingaman "Predatory Pricing and Other Exclusionary Conduct in the Airline Industry: Is Antitrust Law the Solution? 4 DePaul Bus. L. J. 281, 306 (1992) (quoting Michael Levine: "an incumbent who used such tactics [below-cost pricing and yield management] a few times quickly develops a reputation for fierce response to entry. [Levine] calls this reputational information 'the predatory investment in deterrence'.". (footnotes omitted)

but the long-run gain depends on successfully neutralizing the competition . . .” and “on maintaining monopoly power long enough to recoup the predator’s losses and to harvest some additional gain.” *Matsushita*, 475 U.S. at 589.

In *D.E. Rogers Associates, Inc.v. Gardner-Denver Co.*, 718 F.2d 1431 (6th Cir. 1983) the Sixth Circuit adopted the Ninth Circuit’s test in *William Inglis v. ITT Continental Baking Co.*, 668 F.2d 1014 (9th Cir. 1981) for the appropriate measure of a rival’s cost for a predatory pricing claim:

> Although the courts have accepted the marginal or average variable cost standard as an indicator of intent, many allow for consideration of other factors indicative of predation. A leading example of this hybrid approach is that taken by the Ninth Circuit in *Inglis.* There the position was taken that although average variable cost is a generally reliable indicator, there are market situations where a rational firm would find it prudent to sell below its average variable cost. *See id.* at 1035, n. 32. Conversely, it acknowledges that in certain situations, a firm selling above average variable cost could be guilty of predation. *See id.* at 1035. Consequently, it focuses ‘on what a rational firm would have expected its prices to accomplish.’ *Id.* at 1034. Accordingly, it permits the introduction of any evidence, in addition to cost price figures, to illuminate the rationale behind the defendant's pricing policy.
>
> W]e hold that to establish predator pricing a plaintiff must prove that the anticipated benefits of defendant's price depended on its tendency to discipline or eliminate competition and thereby enhance the firm's long-term ability to reap the benefits of monopoly power. If the defendant's prices were below average total cost but above average variable cost, the plaintiff bears the burden of showing defendant's pricing was predatory. If, however, the plaintiff proves that the defendant's prices were below average variable cost, the plaintiff has established a prima facie case of predatory pricing and the burden shifts to the defendant to prove that the prices were justified without regard to any anticipated destructive effect they might have on competitors. *Id.* at 1035-36.
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> Although this circuit has not had an occasion to enunciate a specific cost-based test for predation, we feel that the Ninth Circuit's modified version of the Areeda/Turner test is appropriate.

Id. at 1436-37. (quoting *Inglis*, 668 F.2d at 1035-36 with other citations omitted). Later, we stated that “[i]f, however, the plaintiff proves that the defendant’s prices were below average variable cost, the plaintiff has established a *prima facie* case of predatory pricing and the burden shifts to the defendant to prove that the prices were justified without regard to any anticipated destructive effect they may have on competitors.” *Arthur S. Langenderfer Inc., v. S.E. Johnson Co.*, 729 F.2d 1050, 1056 (6th Cir. 1984) (quoting *Inglis*, 668 F.2d at 1035-36).

This Court has continued to apply this standard. *Directory Sales Mgmnt. Corp. v. Ohio Bell Tel.Co.*, 833 F.2d 606, 613 n. 3 (6th Cir. 1987); *Shavrnoch v. Clark Oil & Refining Corp.*, 726 F.2d 291, 294 (6th Cir. 1984); *Morristown Block & Concrete Co. v. General Shale Prods. Corp.*, 660 F.Supp. 429, 430-31 (E.D. Tenn.); *aff’d* 829 F.2d 39 (6th Cir. 1987) (citing *D.E Rogers*). *See also Schwartz v. Sun Co, Inc.*, 276 F.3d 900, 903-04 (6th Cir. 2002) (price discrimination claim under the Robinson-Patman Act, but the predatory pricing standard is the same as in a Section 2 action).

In addition to providing his opinions on the relevant markets and their characteristics, Professor Elzinga was also retained to provide the methodology to determine Northwest’s relevant prices and costs. Professor Daniel Kaplan, an economist who specializes in airline economics and former director of the Office of Economic Analysis for the Civil Aeronautics Board, performed that

analysis. Professor David Mills, an economist and co-author with Professor Elzinga in the earlier cited articles analyzed Northwest's recoupment of its lost profits from its earlier predatory pricing after Spirit's exit from this market. Professor Mills employed the predation and recoupment test developed with Professor Elzinga and cited by the United States Supreme Court in its *Brooke Group* decision.

After defining the relevant markets, Professor Elzinga established the following methodology for determining Northwest's costs.

> To apply the price-cost part of a predation analysis for this case involved examining the marginal or incremental costs associated with Northwest's response to Spirit compared with the additional revenues the company received from that response. That is, by incurring the costs of the campaign that Spirit claims is predatory, what revenues did Northwest receive as a result? Is the difference between these numbers positive or negative? The analysis, in other words, focuses on revenue from the additional flights (i.e., the extra capacity) that Northwest added (at discounted fares) because the alleged predation was executed through those additional flights. Therefore, the assessment of predation compares the revenues (the price) Northwest received from this tactic versus the incremental (or average variable) cost Northwest incurred from carrying those passengers.

(J.A. 788). (footnote omitted).

In sum, Professor Elzinga's methodology would determine as the appropriate measure of Northwest's costs, its average variable costs to transport the non-connecting passengers on the Detroit-Boston and Detroit-Philadelphia routes. As Professor Elzinga explained, in the alleged predation, "Northwest only. . . match[ed] Spirit's fares for those passengers who might choose Spirit instead of Northwest." (J.A. 795). Professor Elzinga noted that these standards for the appropriate measure of average variable costs are consistent with the classic antitrust treatise of Professors Areeda and Hovenkamp in which the scholars posit that "[i]n such a case involving excess capacity and lower prices to marginal customers, the theocratically correct benchmark is short-run marginal costs with respect to the low price customers." (J.A. 796).[6]

Utilizing Professor Elzinga's methodology, Professor Kaplan determined Northwest's actual average variable costs for the price-sensitive passengers on these routes. Professor Kaplan utilized Northwest's Flight Profitability System ("FPS") that collects the monthly revenues and costs of each of Northwest flight and then aggregates those numbers to determine the profitability of each hub and the relevant spoke. (J.A. 3256-57). To calculate costs for the routes at issue, Professor Kaplan determined Northwest's average variable costs to be "equal to the total variable costs that Northwest incurs serving that city pair during a given time period divided by the number of passengers traveling in that city pair during that time period." (J.A. 3248) Professor Kaplan studied the fares for various months for both city-pairs during 1996. Utilizing Professor Elzinga's definition of the market, Professor Kaplan deemed a fare of $225 as a reasonable dividing line between the price sensitive travelers and other travelers in both city-pairs. (J.A. 3274, 3275). In Professor Kaplan's analysis, all those passengers traveling below $225 in both Philadelphia-Detroit and Boston-Detroit were deemed price-sensitive passengers. *Id.*

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[6] Citing Phillip E. Areeda and Herbert Hovenkamp, Antitrust Law, Vol. III, ¶740 at p. 428 (2d edition 2002).

Professor Kaplan included within average variable costs:[7] flight costs, passenger costs, and gate and ticket counter costs, the latter reflected in depreciation and amortization expenses. (J.A. 3258-60). Professor Kaplan opined that in relation to its response to Spirit, Northwest's flight costs included fuel and labor as well as the cost of the additional aircraft in each market that represented the incremental capacity in Northwest's response to Spirit's presence. (J.A. 3258). The economic cost of using an airplane was based on the market lease rate for the airplane. (J.A. 3259). Passenger variable costs for each route were the costs of processing a passenger's ticket and boarding, the cost of in-flight food and beverages, the expense of liability insurance, and the incremental cost of the fuel needed to carry each passenger. (J.A. 3259-60). Other relevant variables costs are for pilots, flight attendants, gate and counter space. (J.A. 3258).

Professor Kaplan then calculated Northwest's average variable costs for Boston-Detroit and Philadelphia-Detroit "by dividing the various cost factors for each route in each month that Northwest's Flight Profit System ("FPS") identifies as variable, as well as aircraft market value, by the total number of passengers traveling on that segment during the relevant time period. The monthly average variable cost in Boston-Detroit ranged between $65.87 and $85.24 during April though September 1996. The monthly average variable cost ranged between $53.47 and $60.17 in Philadelphia-Detroit during July through September 1996. (J.A. 3266 and 3267). The price range is a function of the variations in the load factor of the flight. (J.A. 3267).

In comparing Northwest's average variable costs and Northwest's average net revenue from "the all passenger service market" on these routes, Professor Kaplan found, in sum:

> *Boston-Detroit*: From April through September 1996, 74.5 percent of Northwest's Boston-Detroit passengers traveled on fares of $69 or less.[] (Northwest established the $69 fare in response to Spirit's April 1996 entry into Boston-Detroit). Northwest's $69 fare on Boston-Detroit on average generated per passenger net revenue of $61.98 after deducting commissions and adding certain other ancillary revenues. This per passenger net revenue was $10.75 below Northwest's average variable cost. Thus, between April and September 1996 the $69 fare being used by passengers traveling on Northwest's Boston-Detroit service was $10.75 below Northwest's average variable cost.
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> *Philadelphia-Detroit*: From July through September 1996, 40.5 percent of Northwest's Philadelphia-Detroit passengers traveled on fares of $49 or less. (Northwest established the $49 fare in response to Spirit's addition of a second flight between Philadelphia and Detroit at the end of June 1996). Northwest's $49 fare on Philadelphia-Detroit on average generated per passenger net revenue of $44.29 during this period after deducting commissions and adding certain other ancillary revenues. This per passenger net revenue was $11.86 below Northwest's average variable cost on Philadelphia-Detroit in the period from July to September 1996. In September 1996, 70 percent of Northwest's Philadelphia-Detroit passengers flew on

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[7] In his report on variable costs, Professor Elzinga also found that "In the airline industry, there are several layers of marginal (i.e. variable) costs . . . Think of these as passenger variable costs. . . and include . . . the cost of processing the ticket, the cost of processing the passenger through the gate, the cost of in-flight food and beverages, insurance and other liability related expenses, and the cost of the extra fuel burned because of the passenger's additional weight. . . [F]light variable costs **...** include the single-passenger variable costs described above, plus takeoff or landing fees, the fuel costs of flying the empty aircraft, and some additional maintenance and crew costs incurred from the operation of the aircraft.

The third are the costs . . . [that] include the opportunity cost associated with the use of that aircraft. . . Finally. . . route variable costs. . . include all of the costs listed above plus costs incurred in setting the new 'station' with ticket counters, maintenance facilities, and other service expenses." (J.A. 789-90).

> fares above $49 but equal to or below $69. The $69 fare in September 1996 generated average net revenue to Northwest of $58.31, which was $1.86 below its average variable cost of serving Philadelphia-Detroit in that month. Consequently, 65 percent of Northwest's Philadelphia-Detroit passengers flew on fares that were less than Northwest's average variable cost in July through September 1996.

J.A. 3249. (footnote omitted).

For the "price-sensitive airline passengers" market on the Boston-Detroit and Philadelphia-Detroit routes, Professor Kaplan performed the same methodology using Northwest's data and found as follows.

> *Boston-Detroit*: [Northwest's] average net revenue from the price-sensitive passengers on this city-pair was $64.82 between April and September 1996. This figure was $8.07 below Northwest's average variable cost during that time period.
>
> *Philadelphia-Detroit*: [Northwest's] average net revenue from the price-sensitive passengers on this city-pair was $50.35 from July to September 1996. This figure was $6.53 below Northwest's average variable cost during that time period.

J.A. 3250.

As noted earlier, both parties' experts calculated Northwest's average variable costs based upon data from Northwest's FPS data system, but Northwest's expert reached different results in his calculation of Northwest's costs and revenues.

Northwest's expert, Professor Janusz A. Ordover, is a Professor of Economics at New York University and former Deputy Assistant Attorney General for the Antitrust Division of the United States Department of Justice. Professor Ordover identified his four step test to determine whether Northwest engaged in predatory pricing and monopolization.

> 1. A structural analysis of the relevant market;
>
> 2. An assessment of the likelihood of anticompetitive (exclusionary) effects resulting from the alleged conduct;
>
> 3. An analysis of pertinent prices (or revenues) and costs to assess whether the competitive response made business sense only because of its adverse impact on competition and would not have made sense if the rival remained viable; and
>
> 4. An evaluation of whether the firm is able to recoup the profits foregone during the period of the predatory behavior.

(J. A. 387). Yet, for his initial analysis, Professor Ordover deemed only an analysis of Step 3 necessary. In a rebuttal report, Professor Ordover addressed the other three factors. In a word, Professor Ordover concluded that by comparing Northwest's average variable costs on each route to Northwest's revenue from all passengers traveling on that route, including connecting passengers, it became clear that Northwest had an incremental profit on each route.

In his analysis, Professor Ordover considered the total revenue from all passengers, leisure travelers as well as connecting passengers, earned from these routes and compared those revenues to Northwest's variable costs for those flights. Revenues from fares of all airline passengers business were totaled and divided to yield an average fare. Professor Ordover then compared Northwest's average prices with its average variable costs on the Detroit-Philadelphia and Detroit-

Boston routes during the months when Spirit operated on these routes. (J.A. 395). For his determination of "route level costs and resources," entitled the "competitive response package", Professor Ordover included "total onboard revenue plus the allocated segmented revenue from the connecting passengers on a flight, plus a beyond contribution from the flow connecting passengers." (J.A. 401-02).

As to variables costs, Professor Ordover included several of the same cost elements as Professor Kaplan, but for the costs of the aircraft, Professor Ordover declined to use the commercial lease rates for the aircraft and instead chose "the opportunity costs of the aircraft and its least attractive alternative deployment within the airline's system." (J.A. 402). Utilizing the components of Northwest's FPS, Professor Ordover found, in sum, as follows:

> . . . As seen there, both VABS and VABSO[8] were positive during the time period when Northwest was matching, or partially matching, Spirit's fares (April through September 1996). For example, in June 1996 the VABS measure was approximately $5.8 million for the route and the VABSO measure was approximately $5.0 million. These June 1996 amounts are equivalent to about $68 and $58 per one-way segment passenger, respectively. The positive VABS and VABSO results for April through September indicate that the average fare plus the beyond contribution from passengers traveling between Detroit and Boston exceeded average variable cost.
>
> Further, even the measures that do not take account of the beyond contribution, the VAC and VACO measures, were positive in every month (i.e., Northwest's average Detroit-Boston segment fare exceeded its average variable cost). Indeed, the only negative profitability measure is the May 1996 fully allocated contribution (FAC), which excludes the beyond contribution and is equal to total revenue minus fully allocated expenses. When the beyond contribution is included, in the fully allocated with beyond contribution (FABS), this cost measure was positive for May 1996. As discussed above, variable rather than fully allocated costs are the pertinent standard; yet the fact that Northwest was profitable even based on the much higher fully allocated cost standard during this period provides further support for the conclusion that its conduct was not predatory.
>
> . . .[According to] FPS data for the Detroit-Philadelphia route for 1995 and 1996 [,] [b]oth VABS and VABSO were positive during the entire time period when Northwest was matching Spirit's fares on this route (July through September). The July 1996 amounts of approximately $2.8 million for VABS and $2.5 million for VABSO, for example, are equivalent to about $67 and $60 per one-way segment passenger, respectively. In addition, both the variable cost-based measures that do not take account of the beyond contribution (VAC and VACO) and the measures based on fully allocated costs (FAC and FABS) were positive in every month.
>
> In summary, the positive FPS profitability measures based on variable costs clearly demonstrate that predation did not occur on the Detroit-Boston and Detroit-Philadelphia routes. In addition, with revenues exceeding the pertinent measure of total cost, each route clearly makes economic sense. Put another way, an airline

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[8] Dr. Ordover explained that "VABS is equal to total onboard revenue (for the route segment) plus net beyond revenue contribution, minus variable expenses. VABSO is equal to VABS minus the cost of aircraft ownership. These measures which include the beyond contribution are used by Northwest in order to assess the profitability of individual routes as part of the overall network. VABS is often used for relatively short-term tactical marketing decisions and VABSO is frequently used to determine whether a route is successful over time." (J.A. 401, n. 44).

> would not deliberately lose money on the routes by offering the schedule of flights that it did. This means that the competitive response makes sense even if the competitor continues to be viable.

(J.A. 403-04).

Based on his comparison, Professor Ordover concluded that Northwest's average fares on the routes exceeded its average variable costs. From these findings, Profess Ordover inferred that Northwest's pricing response to Spirit's entry on these routes would have been profitable even if Spirit had continued to serve these cities.

Professor Ordover criticizes Professor Kaplan's segmentation of Northwest's average variable costs for local passengers on those routes because all passengers, including connecting passengers, contribute to the revenue of the flight as part of the hub network. *Id.* Moreover, Professor Ordover notes that added capacity affects more than revenue, including enhancement to the overall schedule to connecting flights, reduction in crowding and increasing the availability of attractive fares. Hence, Professor Ordover views any contribution of revenues from connecting passengers as necessary to assess whether Northwest's response was predatory.

In his rebuttal report, Professor Elzinga supported Professor Kaplan's comparison of Northwest's prices and costs in the leisure traveler market as the more appropriate measure of average variable costs. (J.A. 871). In Professor Elzinga's view, Professor Ordover improperly calculated all passengers revenue on each of those routes, including connecting passengers. (J.A. 8741). Professor Elzinga explains that the relevant market is the local passengers because those are the passengers whom Northwest sought to divert from Spirit.

As to Professor Ordover's statement that: "each route (and flight) is part of a network; if the route or flight were removed there would be a reduction in revenues not only from that route or flight but also on other routes in the network," Professor Kaplan citing a Northwest document called "Boston-Detroit STIMULATION ANALYSIS", responded that this document actually "demonstrates that Northwest had flexibility to adjust capacity to accommodate changes in local and connecting passenger demands independently of one another." (J.A. 886). In Professor Kaplan's view, this document "also demonstrates that additional connecting passengers in Boston-Detroit provided little value to Northwest." *Id.* Professor Kaplan also cited Northwest's plan to reduce its scheduled capacity in the summer of 1996 before Spirit's entry and opined that this decision "suggest[s] that revenue generated by the added passengers would not cover the opportunity cost of serving them." (J.A. at 888). Spirit also noted that Northwest executive vice-president Michael E. Levine acknowledged that: "All connecting passengers are not of equal value. The least valuable connecting passengers who go through a hub are purely price driven and not - not a very interesting source of revenue; it's just that you use them to fill seats." *Id.*

To be sure, Professor Leffler, a Spirit expert, cited the opinion of Northwest's expert Robert S. Pindyck on the appropriate measure of average variable costs in Northwest's action against American Airlines for predatory pricing. Professor Pindyck is the Mitsubishi Bank Professor of Applied Economics at the Sloan School of Management at the Massachusetts Institute of Technology. Professor Pindyck's research and teaching are in the areas of industrial organization and antitrust economics and his writings include articles on monopoly power and pricing that have been published in leading economics journals. Professor Pindyck is an author or co-author of six books, including two leading textbooks, *Microeconomic* and *Econometric Models and Economic Forecasts*. In Northwest's action against American Airlines for predatory pricing, Professor Pindyck opined: "Although costs have been measured for all domestic national airline passenger service, *it may be useful to determine costs separately for "business" service and "leisure" service*. (J.A. at 954). (emphasis added). Moreover, in the action against American Airlines, another

Northwest expert stated: "All airline seats on a particular flight provide transportation between the two airports served by that flight, but *it is not accurate to say, even within a specific class, that these seats provide the same service or have the same cost*." (J.A. 4202). (emphasis added). .

Professor Elzinga noted that his standards for the appropriate measure of average variable costs are consistent with the classic antitrust treatise of Professors Areeda and Hovenkamp, in which the scholars assert that "[i]n such a case involving excess capacity and lower prices to marginal customers, the theocratically correct benchmark is short-run marginal costs with respect to the low price customers." (J.A. 796). (quoting Phillip E. Areeda and Herbert Hovenkamp, Antitrust Law, Vol. III, ¶740 at p. 428 (2d edition 2002)).

As we stated earlier, we conclude that a reasonable trier of fact could find that the underlying cost data from Northwest's data systems, which Professor Elzinga and Professor Kaplan used in their analyses, is reasonably accurate and that this data supports their cost calculations for the price-sensitive market. Northwest's expert used the same cost data in his cost-revenue analysis. If a reasonable trier of fact could accept Professor Ordover's cost determinations as reasonably accurate, it stands to reason that Spirit's experts' determinations, which are based on the same cost data, must be deemed reasonably accurate as well.

To be sure, the district court found that Spirit failed "to explain why it is not necessary to isolate the costs of serving price-sensitive passengers from those incurred in serving Northwest's remaining passengers." (J.A. 71). Spirit's cost analysis included cost measures that were not specifically linked to price-sensitive passengers, but common to all passengers. Spirit's experts explained their rationale for using this metric rather than a figure more narrowly defined to the price-sensitive market. We hold that a reasonable trier of fact could find Spirit's rationale convincing, and therefore conclude that the costs attributable to all customers is a reasonably accurate proxy for the costs associated with price-sensitive passengers only.

The evidence reflects that in its data system, Northwest did not consider any meaningful differences to exist in the average variable costs for different passengers. Northwest's FPS data system that both Professor Kaplan and Professor Ordover utilized to calculate Northwest's costs for these routes, does not distinguish among passengers in its allocations of costs. (J.A. 4410-12). Northwest's "Price-Out Model," for its flight profitability analysis likewise does not distinguish between passengers in computing costs. If a reasonable trier of fact could find Northwest's FPS data system and "Price-Out-Model" are accurate and reliable for cost allocations, then Professor Kaplan's use of that same data must be reasonably accurate as well.

Moreover, as Professor Kaplan explained, non-passenger variable costs such as crew, fuel and possibly aircraft do not vary with passengers because the same service is provided to both sets of passengers. As Professor Kaplan stated:

> I assumed . . . the cost of providing service . . . on a route such as [Detroit-Boston/Philadelphia] had roughly constant returns to scale and that consequently . . . *looking at the average variable cost was a reasonable representation of what their cost would be if they expanded capacity, expanded output on the route.*
>
> My view is that . . . there are reasonably constant returns to scale. And, the reason that I believe that is . . . airlines have a variety of mix of aircraft of . . . different ages and different sizes and different configuration. And as consequences, when you are looking at . . . the operation in any given route, . . . *it's perfectly reasonable to assume that . . . when they expand capacity it will roughly be at the cost at which they . . . had provided the capacity that [had] existed prior to that.*

(J.A. 4274, 4294). (emphasis added). Professor Ordover, Northwest's expert, considered his dispute with Spirit's economic experts on the determination of the appropriate measure of average variable costs to be an "intellectual disagreement." (J.A. 1734).

For summary judgment purposes, we think this evidence supports the reasonable inference that average variable costs did not vary among passengers and thus, Spirit's experts' cost determinations could be found by the trier of fact to be reasonable. In our view, a trier of fact could reasonably accept Spirit's experts' definition and calculation of Northwest's incremental costs to attract the leisure travel passengers on these routes as the appropriate measure of Northwest's average variable costs for deciding Spirit's Section 2 claim against Northwest. We conclude that this "intellectual disagreement" among the parties' experts creates material factual disputes on the relevant market and the appropriate measure of costs for the service at issue so as to preclude an award of summary judgment. Although the district court found that Spirit's expert-opinion testimony made no economic sense, we conclude that a reasonable trier of fact could find that the testimony of Spirit's experts is reasonable based upon facts in the record and relevant economic principles.

In support of its summary judgment motion, Northwest relies upon the Tenth Circuit's decision in *United States v. AMR Corp.*, 335 F.3d 1109 (10th Cir. 2003), in which the Government alleged that American Airlines engaged in predatory pricing on routes from its hub at Dallas-Fort Worth airport in an attempt to drive emerging low-cost carriers out of the market. At issue in the case was the viability of the four price-cost tests which the Government claimed demonstrated that American Airlines was pricing below its costs. In granting summary judgment in favor of American Airlines, the Tenth Circuit held that none of the four tests the Government had utilized was a true measure of the incremental cost of adding additional passengers on the challenged routes. Therefore, the court held that the Government's evidence of alleged predatory conduct made no economic sense. Relying on this holding, Northwest argues that Spirit's price-cost analysis is similarly flawed. We disagree.

First, unlike three of the tests in AMR, Northwest does not contend that Spirit's price-cost test is flawed because it includes a portion of fixed costs or measures reduced profitability. Instead, Northwest relies on the Tenth Circuit's rejection of a price-cost test that included arbitrarily allocated common costs which do not vary proportionately with changes in American Airlines' capacity. The Tenth Circuit held that it was inappropriate to evaluate incremental passenger revenue against these more general administrative and overhead costs. By contrast, in this case, Spirit's price-cost analysis is based on Northwest's FPS system which specifically distinguishes between fixed and variable costs, defining the latter term as costs which do vary with flight activity. Northwest's expert conceded that the FPS system calculates a reasonable approximation of the average variable costs for a route and is the proper measure to use in evaluating allegations of predatory pricing. (J.A.402). Accordingly, we conclude that a reasonable trier of fact could find that Spirit's price-cost analysis is accurate and reliable, and therefore distinguishable from the analysis put forth in *AMR.*

To be sure, as Northwest argues, in *Directory Sales*, where the market was advertisement services, we found that the plaintiff's showing of sales below costs must be determined as to the Defendant's "overall charges." 833 F.2d at 614. Yet, we did so only because "[w]e are persuaded that the first [free] listing [advertisement] is not a separate product market for the purposes of predatory pricing." *Id. Directory Sales* is factually inapposite and distinguishable. We adopt the principle of *Brooke Group* that where reasonable economic proof justifies a relevant market, the appropriate measure of costs for a predatory pricing claim is for the particular good or service in that market, not all products or services sold by the defendant.

Other Circuits have determined the appropriate measure of cost for predatory pricing claims to be the average variable cost of the product or service in the relevant market. *Multistate Legal Studies, Inc. V. Harcourt Brace Jovanovich Legal & Prof'l Publ'ns, Inc.,* 63 F.3d 1540, 1549 n. 7 (10th Cir. 1995) (where the products at issue involved full-service bar review courses and supplemental workshops the Tenth Circuit stated, "the relevant product market for predatory pricing's cost-price analysis is the supplemental workshop rather than the [the full service and supplemental bar review] package"); *U.S. Anchor Mfg., Inc. v. Rule Industries, Inc.*, 7 F.3d 986, 996 (11th Cir. 1993) (where the products were brand anchors as well as generic and economy anchors that were sold by both parties, the Eleventh Circuit stated: "We hold, however, that the relevant market in this case constituted light weight generic and economy fluke anchors. Four of the *Brown Shoe* factors weigh strongly in favor of excluding Danforths [the brand product] from the relevant market.")

4. Significant Barriers to Entry

In this Circuit, another factor in determining predatory pricing is "whether **. . .** barriers to entry are high" because "[t]he existence of high entry barriers is significant in determining the existence of predatory intent, inasmuch as only where such barriers exist will there be incentive to price predatorily." *Richter Concrete Corp. v. Hilltop Concrete Corp.*, 691 F.2d 818, 824 (6th Cir. 1982).

Here, the record reveals that Northwest controlled sixty-four of the seventy-eight gates at the Detroit airport under long-term leases. Levine, a Northwest executive, testified that these leases created a "very high" barrier to entry into the Detroit market for any competitor. To provide service from Detroit, Spirit had to pay $100,000 to access a gate as well as 25% higher landing fees than airlines with long-term leases, like Northwest. Relying on this evidence in the record, a reasonable trier of fact could certainly conclude that significant barriers to entry existed in the Detroit market which made predatory pricing possible.

Moreover, a law review note collecting economic studies of this market reported as follows:

> [T]he linear point-to-point structure that predominated under regulation was replaced by a nearly pervasive hub-and-spoke system. While some have praised the hub-and-spoke system for its efficiency, many others have also described its utility as an entry-deterrence strategy.
>
> Legacy airlines remain dominant in the industry, and their hub-and-spoke route structure is still the industry's single most important structural characteristic**. . .**
>
> *Economists studying networks have demonstrated that . . . adopting a hub-and-spoke structure is an effective means of entry deterrence. Part of this deterrence stems from the market power that hubbing creates on flights that originate or terminate at the hub. Since the hubbing airline typically controls a large proportion of the flights in and out of its hub airport, it can raise fares on those flights without fear of competitive entry.* Furthermore, *an airline's dominant presence at its hub may allow it to exert veto power over any plans to expand the airport's capacity, which further limits the possibility of competitive entry and its attendant check on market power. According to some scholars, having a large network also enables legacy airlines to price predatorily on routes served by entrants, thereby causing the entrant to expend cash reserves and exit the market* while the incumbent "experiences an economy of scope in the value of reputation for fierceness as a deterrent to other entrants in other markets or in the future."

Note, "Compatibility And Interconnection Pricing In The Airline Industry: A Proposal For Reform," 114 Yale L.J. 405, 423, 424, and 425 (2004) (emphasis added and footnotes omitted). Another law review note describes the market power that this barrier creates in this industry: "When an airline controls a substantial percentage of enplanements at an airport, it wields significant power over its competitors' access to airport space." Note, "The Antitrust Implications Of Airport Lease Restrictions," 104 Harv. L. Rev. 548, 567 (1990).

In sum, the facts and the economics of this industry could reasonably be found to establish significant barriers to entry. Further, a reasonable fact-finder could conclude that these barriers enabled Northwest's predatory pricing to be plausible and successful.

5. Recoupment

The second prerequisite under § 2 of the Sherman Act, is proof that the competitor recovered or had a reasonable prospect or a dangerous probability of recouping its investment in below-cost prices. *Matsushita*, 475 U.S. at 589; *Cargill v. Monfort of Colorado, Inc*, 479 U.S. 104, 119 n.15 (1986). "For the investment to be rational, the [predator] must have a reasonable expectation of recovering, in the form of later monopoly profits, more than the losses suffered." *Matsushita*, 475 U.S. at 588-89. It must be remembered that: "Recoupment is the ultimate object of an unlawful predatory pricing scheme; it is the means by which a predator profits from predation. Without it, predatory pricing produces lower aggregate prices in the market, and consumer welfare is enhanced. Although unsuccessful predatory pricing may encourage some inefficient substitution toward the product being sold at less than its cost, unsuccessful predation is in general a boon to consumers." *Brooke Group*, 509 U.S. at 224.

As the Supreme Court explained, proof of sales below the defendant's appropriate measure of costs and the likelihood of recoupment are "prerequisites to recovery [that] are not easy to establish, but they are not artificial obstacles to recovery; rather, they are essential components of real market injury." *Id.* at 226.

> For recoupment to occur, below-cost pricing must be capable, as a threshold matter, of producing the intended effects on the firm's rivals, whether driving them from the market, or, as was alleged to be the goal here, causing them to raise their prices to supracompetitive levels within a disciplined oligopoly. This requires an understanding of the extent and duration of the alleged predation, the relative financial strength of the predator and its intended victim, and their respective incentives and will. See 3 Areeda & Turner ¶ 711b. The inquiry is whether, given the aggregate losses caused by the below-cost pricing, the intended target would likely succumb.
>
> If circumstances indicate that below-cost pricing could likely produce its intended effect on the target, there is still the further question whether it would likely injure competition in the relevant market. The plaintiff must demonstrate that there is a likelihood that the predatory scheme alleged would cause a rise in prices above a competitive level that would be sufficient to compensate for the amounts expended on the predation, including the time value of the money invested in it. As we have observed on a prior occasion, '[i]n order to recoup their losses, [predators] must obtain enough market power to set higher than competitive prices, and then must sustain those prices long enough to earn in excess profits what they earlier gave up in below-cost prices.'

Id. at 225-26.[9] (quoting *Matsushita*, 475 U.S. at 590-91).

Likewise, we have required proof of an injury to competition by a firm's predatory pricing, to sustain a Section 2 claim of monopolization.

> In determining whether conduct may be characterized as exclusionary, "it is relevant to consider its impact on consumers and whether it has impaired competition in an unnecessarily restrictive way." *Aspen*, 472 U.S. at 605. "If a firm has been attempting to exclude rivals on some basis other than efficiency, it is fair to characterize its behavior as predatory [or exclusionary.]" *Id.* However, merely because an entity has monopoly power, does not bar it from taking advantage of its scale of economies because of its size. *Id.* at 597, 105 S.Ct. 2847. Such advantages "are a consequence of size and not the exercise of monopoly power." *Id.*

Conwood, 290 F.3d at 783 (emphasis added). In *Conwood*, we deemed a predator's conduct causing "higher prices and reduced consumer choice . . . harmful to competition". *Id*. at 789.

Professor Mills, one of Spirit's experts calculated Northwest's recoupment from its predatory pricing within months after Spirit's exit from these routes. Professor Mills concluded:

> **V.A. Northwest Monthly Sacrifice**
> **During Predation in the DTW-PTL**
>
> Northwest did not cut its fares in response to Spirit's entry on the Detroit-Philadelphia route until Spirit added a second flight in late June 1996. Once underway, Northwest sustained its low fares until Spirit halted both of its flights on the route and withdrew from the Detroit-Philadelphia market in late September 1996 (the same month Spirit withdrew from the Detroit-Boston market).
>
> I apply the same methodology used in the Detroit-Boston market to calculate the average monthly sacrifice Northwest would expect to incur by charging predatory prices in the Detroit-Philadelphia market. To get this quantity, I calculate and average the monthly sacrifice for each of the months July, August, September 1996. This quantity measures the sacrifice Northwest would expect during every month it charged predatory prices.
>
> Values for Northwest's anticipated average monthly sacrifice are shown in . . . estimates of E the elasticity of Northwest's residual demand, in the range of 0.3 - 1.0. . . . [F]or instance, . . . if the price elasticity of Northwest's residual demand were 0.65, Northwest's average monthly sacrifice during predation, using cost based estimates for the otherwise prevailing price, would have been $241,126.
>
> **V.B. Northwest's Monthly Returns**
> **After Predation in the Detroit-Philadelphia Market**
>
> As before, the second task is to calculate the average monthly return Northwest expected to receive immediately after Spirit exited the Detroit-Philadelphia market. Applying the same methodology used in the Detroit-Boston market, I calculate and average the monthly return Northwest anticipated on both a

[9]Economists note that to avoid costly litigation, proof of recoupment alone can serve as an independent screening mechanism for predatory pricing claims. See Donald J. Boudreaux, Kenneth G. Elzinga and David Mills, "The Supreme Court's Predation Odyssey: From Fruit Pies to Cigarettes," 4 Sup. Ct. Econ. Rev. 57, 72 (1995).

looking forward basis and a looking backward basis. I do this for the three months of November 1996 - January 1997 for the looking forward scenario and for the same three months in 1995 - 1996 for the looking backward scenario.

Values for Northwest's anticipated average monthly return are shown in ... alternative estimates of E ranging from 0.3 to 1.0. For instance, if the price elasticity of Northwest's residual demand were 0.65, Northwest's average monthly return during recoupment would have been $756,845, evaluated on a looking forward basis, and $570,769 evaluated on a looking backward basis.

V.C. How Long Does Recoupment Take in Detroit-Philadelphia

To judge whether Northwest would have anticipated that predatory pricing in the Detroit-Philadelphia market would be profitable, one must compare Northwest's anticipated monthly sacrifice during predation with the airline's anticipated monthly return during recoupment. If Northwest expected that it would take two-four months of predation to drive Spirit out of the market (in fact, **it** took three months), how many months of recoupment would the company have needed to recoup its predatory investment? The answer to that question is found using the same approach as before in the Detroit-Boston market.

Based on the values of M and R ..., an annual hurdle rate of 15% and the residual price elasticity measures used before, and substituting values and six for p, the number of months of predation anticipated, I find how long Northwest would expect it to take to recoup its investment in predatory pricing . . .

For instance, if Northwest's otherwise prevailing prices were those predicated by the cost-based approach, and if it anticipated two months of predation, Northwest would recoup its investment during the first month of recoupment. If the airline anticipated four months of predation, Northwest would recoup its investment during the second month of recoupment. Recoupment is not as immediate using the comparable market-based otherwise prevailing prices. But even if Northwest's otherwise prevailing prices were those predicted by the comparable market approach, and if it anticipated two months of predation, Northwest would recoup its investment between the second and fourth month of recoupment, depending on the elasticity of its residual demand. And if it anticipated four months of predation, Northwest would recoup its investment between the third and seventh month of recoupment, depending on its elasticity of residual demand. Just as in the Detroit-Boston market, Northwest could not expect to be back "in the black" in the Detroit-Philadelphia market as quickly as if otherwise prevailing prices were lower.

V.D. Is Recoupment Plausible in the Detroit-Philadelphia Market?

Given entry conditions, and especially the gate-constrained conditions Northwest's potential competitors faced at Detroit, as Professor Elzinga emphasized, Northwest certainly would have expected its renewed high prices to last long enough for the airline to recoup its investment in predatory pricing. Barriers to entry were sufficiently high that Northwest would not have expected Spirit to re-enter, or another entrant to arrive, for a period substantially longer than the necessary recoupment period. This conclusion is supported by the fact that, in retrospect, the first and only significant entry event in Detroit-Philadelphia since Spirit withdrew from the market occurred in May 1998 when Pro Air introduced service between Detroit City Airport (DET) and PHL. This happened nineteen months after Spirit's

> withdrawal; there was ample time for Northwest to recoup it investment in predatory pricing before Pro Air challenged Northwest's dominance in the market.

J.A. 3185-88.

The trier of fact could reasonably find that Northwest recouped any losses from its predatory pricing quickly after Spirit left these routes. Here, Spirit's expert proof shows that Northwest recovered its losses within months of Spirit's exit from the market. In addition, upon Spirit's exit, Northwest increased its prices on these routes to a multiple of seven from its prices during Spirit's presence. These facts could also lead a reasonable juror to conclude that a competitive injury occurred in this market, namely, air travelers' payment of higher prices by consumers for air travel on these routes.

After Spirit's exit, Northwest also dropped flights notwithstanding the increased customer demand of "price-sensitive travelers" for those routes. The significant adverse competitive impact from Northwest's conduct could reasonably be found to be those Detroit consumers who were leisure travelers to Boston and Philadelphia and who lost a choice of airlines. These consumers suffered not only a reduction in the supply of flights to these cities, but, to travel these routes, had to pay an almost seven-fold price increase. With the "very high" barriers to entry, the consumers for this route likely would not have any viable alternatives to Northwest airlines for the foreseeable future. To be sure, the antitrust laws are for "the protection of *competition,* not *competitors*." *Brooke Group*, 509 at 224 (emphasis in the original quoting *Brown Shoe*, 370 U.S. at 320). Yet, in a concentrated market with very high barriers to entry, competition will not exist without competitors. See Andrew I. Gavil, "Exclusionary Distribution Strategies by Dominant Firms: Striking A Better Balance" 72 Antitrust L. J. 3, 81 (2004).

6. Spirit's Non-Price Predation Claims

As stated earlier, Spirit also maintained that a key component of its monopolization claim and Northwest's predatory strategy was Northwest's expansion of its capacity on these routes. Professor Elzinga identified this response as critical to Northwest's successful predation. Michael Levine, a Northwest executive, had authored an article espousing this strategy for responding to new low fare carriers. The district court deemed its finding on the cost issue to be determinative. We respectfully disagree.

Contrary to the district court's conclusion that proof of Northwest's revenues exceeding its average variable costs effectively ends the inquiry, *Brooke Group* emphasized that even where theory suggests that predatory pricing is rare, "[h]owever unlikely that possibility may be as a general matter, when the realities of the market and the record facts indicate that [a predatory pricing scheme] has occurred and was likely to have succeeded, theory will not stand in the way of liability." 509 U.S. at 229. (citing *Eastman Kodak*, 504 U.S. at 466, 467). In *Conwood*, we explained "'[a]nticompetitive conduct' can come in too many different forms, and is too dependent upon context, for any court or commentator ever to have enumerated all the varieties." 290 F.3d at 784 (quoting *Carribean Broad. Sys. Ltd. v. Cable & Wireless PLC,* 148 F.3d 1080, 1087 (D.C. Cir. 1998).). Moreover, in *D.E. Rogers*, we adopted the *Inglis* rule that "acknowledges that in certain situations, a firm selling above average variable cost could be guilty of predation." 718 F.2d at 1436 (citing *Inglis* 668 F.2d at 1035).

More particularly, the Third Circuit has held that a defendant's sales above its costs does not end the Section 2 analysis. In its *en banc* decision in *Lepage's Inc. v. 3M (Minnesota Mining and Manufacturing Co.*, 324 F.3d 141 (3rd Cir. 2003), the Third Circuit stated:

> Assuming *arguendo* that *Brooke Group* should be read for the proposition that a company's pricing action is legal if its prices are not below its costs , nothing in the

> decision suggests that its discussion of the issue is applicable to a monopolist with its unconstrained market power....
>
> *[Brooke Group]* does not discuss, must less adopt, the proposition that a monopolist does not violate § 2 unless it sells below cost. Thus, nothing that the Supreme Court has written since *Brooke Group* dilutes the Court's consistent holdings that a monopolist will be found to violate § 2 of the Sherman Act if it engages in exclusionary or predatory conduct without a valid business justification.

Id. at 151,152.

Spirit's experts provided a reasonable economic explanation of the anticompetitive effects of Northwest's two-prong response to Spirit's entry on these routes, that included a rapid expansion of Northwest's capacity on these routes. As Professor Elzinga explained:

> The goal of predation in this case is for the incumbent firm, Northwest, to drive the entrant, Spirit, from the market. The most effective way for Northwest to do this is to divert passengers that would have otherwise flown on Spirit to Northwest, thereby lowering Spirit's revenues below its costs. This is in fact what happened. Spirit's load factor plummeted after Northwest lowered prices to match Spirit's and added capacity. Spirit's per passenger costs for serving its remaining customer base rose.
>
> If Northwest simply lowered its price on its extant flights and did not add capacity, it is unlikely that a sufficiently large number of Spirits's passengers would be diverted and as a consequence drive Spirit from the market. The reason is because Northwest presumably had optimized its capacity utilization before Spirit entered and so Northwest could not add a large number of additional passengers even at lower prices unless it also increased capacity. Thus, a critical element of predation in the markets at issues here is not only whether Northwest lowered its prices but whether Northwest added capacity as part of a predatory strategy in order to drive Spirit's load factor so low that Spirit could no longer remain in the market.
>
> The lowering of price on Northwest's extant capacity would seldom if ever be judged predatory under the price-cost test suggested by Areeda and Turner. This is an artifact of the cost structure in the airline industry compared to conventional manufacturing plants envisioned by Areeda and Turner. In the airline industry, the marginal cost of additional passengers on extant flights with excess capacity is very low, and below almost any imaginable fare. But even very low prices on extant flights are unlikely to drive a low-price entrant from the market because such low prices on extant flights would not divert sufficient passengers to cause the entrant to exit.
>
> In contrast, when a major carrier like Northwest drops prices radically and adds capacity and output, it incurs all of the variable costs associated with additional capacity described earlier. Thus, if the incremental costs of capacity additions (aimed at serving the new lower-fare passengers that Northwest hopes to divert from Spirit) are more that the incremental revenues, then the addition of capacity is predatory because it entails losses that can be explained only as an investment to drive Spirit from the market. These incremental costs can be avoided by not adding capacity. Consequently, the revenues and costs of additional capacity are (or at least should be) the focus of the analysis of predation in the airline industry.

> For a firm with market power, such as Northwest on the routes in question, economic analysis teaches that it is not optimal to add capacity whose costs exceed revenues in response to entry unless the incumbent can hope to drive the entrant from the market. The reason is that a firm with market power sets its output (or selects its market capacity) so that marginal revenue equals marginal cost. When a new firm enters the market, the (residual) demand curve for the incumbent firm decreases (shifts to the left), thereby decreasing the incumbent firm's marginal revenue and making it optimal to lower price and reduce capacity and output, not increase it as did Northwest.

J.A. 792-94. This explanation is wholly consistent with the strategy described by Levine, Northwest's former expert and now executive, as described earlier and is corroborated by the Oster-Strong economic study on the "Multiple Competitive Tools" in this industry.

In sum, even if the jury were to find that Northwest's prices exceeded an appropriate measure of average variable costs, the jury must also consider the market structure in this controversy to determine if Northwest's deep price discounts in response to Spirit's entry and the accompanying expansion of its capacity on these routes injured competition by causing Spirit's departure from this market and allowing Northwest to recoup its losses and to enjoy monopoly power as a result.

For these collective reasons, we reverse and remand this action for further proceedings in accordance with this opinion.

CONCURRING IN THE JUDGMENT

KAREN NELSON MOORE, Circuit Judge, concurring in the judgment. While I agree with the majority's holding, I write separately to express my own views on this complicated case.

I. ANTITRUST LAW

Any court reviewing a claim brought under § 2 of the Sherman Act, 15 U.S.C. § 2, must be especially mindful of the fine line between illegal predation and healthy competition. As the Supreme Court has stated, "[i]t would be ironic indeed if the standards for predatory pricing liability were so low that antitrust suits themselves became a tool for keeping prices high." *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 226-27 (1993). Thus, successful predation claims are limited to the rare instance in which an incumbent seeks to retain monopolist control in the future by ceasing to engage in economically rational behavior in the present in an effort to drive potential rivals from the market. Predation is not proven merely through the absence of profit maximization but rather through the absence of profitability itself in the relevant market. *See MCI Communications Corp. v. AT & T Co.*, 708 F.2d 1081, 1114 (7th Cir.) (holding that imposing a profit-maximization rule as the standard for liability "would tend to freeze the prices of dominant firms at their monopoly levels and would prevent many pro-competitive price cuts beneficial to consumers"), *cert. denied*, 464 U.S. 891 (1983). Therefore, only when predatory prices are set below an appropriate measure of costs will liability be imposed.

Additionally, to establish a predatory-pricing claim, a plaintiff must demonstrate that following the predation period, the incumbent has "a reasonable prospect, or, under § 2 of the Sherman Act, a dangerous probability, of recouping its investment in below-cost prices." *Brooke Group*, 509 U.S. at 224. As the Court has noted, "[r]ecoupment is the ultimate object of an unlawful predatory-pricing scheme; it is the means by which a predator profits from predation." *Id.* Put another way, recoupment is the return to monopolist control which is at the heart of the incumbent's anti-competitive behavior. Having established the two requirements for proving a predatory-pricing claim under § 2 of the Sherman Act, I turn to the claims presented in this case.

II. THE AIRLINE INDUSTRY

Applying the theoretical principles outlined above to the reality of the airline industry presents a challenging task. Inquiring into whether Northwest Airlines, Inc. ("Northwest") charged prices below an appropriate measure of costs implicates several peculiarities of the airline industry. Professors Areeda and Turner, the first commentators to propose a specific cost-based standard for predatory pricing, argued that pricing below short-term marginal cost should be deemed unlawful. Phillip Areeda & Donald F. Turner, *Predatory Pricing & Related Practices under Section 2 of the Sherman Act*, 88 Harv. L. Rev. 697, 712 (1975). Given the real-world difficulty in ascertaining a firm's marginal cost, however, Professors Areeda and Turner suggested using a firm's average variable cost, defined as total variable costs divided by total units produced, as a proxy for marginal cost. *Id.* at 700, 716. Thus, in a traditional industry, if a manufacturer prices its product, a widget, below the average variable cost of producing widgets, the Areeda-Turner model would find the price to be predatory.

Unlike a traditional manufacturer, however, the airline industry presents a more complicated scenario because the bulk of its variable costs are common costs shared among all passengers on a flight. Once an airline commits to flying a plane along a specific route, the airline must incur the costs of the pilots, flight attendants, fuel to fly the empty plane, ownership of the plane, and

servicing, without regard to the actual number of passengers on the plane. Despite the common nature of these costs, they are still treated as variable costs of the route because the airline could avoid incurring all of them by exiting the route and redeploying the plane to an alternative route. In addition to these common-variable costs, the airline incurs incremental costs for each additional passenger added on the plane. These passenger-variable costs include the costs associated with processing the ticket, beverage and food service (if any), incremental fuel required to carry the passenger, and baggage service. Thus, the passenger-variable costs are quite minimal compared to the common-variable costs, or non-passenger variable costs of the route. This disproportional nature between the passenger-variable costs and the common-variable costs has significant implications with regard to evaluating a predatory-pricing claim. For example, suppose on a given route the common-variable costs were $1,000 and the passenger-variable costs were $10 per passenger, and only two passengers were flown, the total variable costs would be approximately $1,020, and the average variable cost would be $510. A fare charged below that amount would be considered predatory pricing under the Areeda-Turner analysis. With each additional passenger added to the plane, however, the average variable cost declines because the common-variable costs are the bulk of the airline's expense and the incremental cost of each additional passenger is so minimal. Thus, if twenty passengers flew on the plane, the total variable costs would be approximately $1,200, and the average variable cost would be $60. Thus, in this scenario, under the Areeda-Turner model, a fare must be below $60 to be considered predatory.

The analysis of the airline market takes on an additional level of complexity when price discrimination is taken into account. Anyone who has ever flown on short notice can attest to the fact that similar seats on the same plane are not priced identically. Indeed, once an airline has committed to flying a plane on a certain route and the common-variable costs have already been incurred, it is in the airline's interest to fill the capacity on the plane given the fact that the incremental cost of each additional passenger is so low and each passenger further reduces the average variable cost. Thus, airlines often sell deeply discounted fares to utilize the unused seats. As Professors Areeda and Hovenkamp have stated, "[i]n the airplane case the seat is going out anyway, full or empty, and any price above the cost of serving the additional passenger will make the additional sale profitable." III Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 742c, at 466 (2d ed. 2002). The question before a court in evaluating an antitrust claim becomes whether predatory pricing should be evaluated based on each individual fare or on a larger route-wide basis. For example, under the scenario laid out above, if ten passengers paid a fare of $120 each and thereby covered the total variable costs, while the remaining ten passengers paid a discounted fare of $50 each, the route itself would be profitable, generating $500 more than the total variable costs. The $50 discounted fare, however, would be below the average variable cost, and therefore, the question before the court would be whether pricing on *that fare* should be considered predatory. This is precisely the issue at the heart of Spirit Airlines, Inc. ("Spirit")'s § 2 claim against Northwest.

The Eighth Circuit has rejected such a narrow fare-specific approach, holding that it is "necessary to consider not just [an airline's] lowest prices, but all of its prices for the routes involved, for that is the only basis upon which the relationship between [the airline's] charges and costs could be determined." *Int'l Travel Arrangers v. NWA, Inc.*, 991 F.2d 1389, 1396 (8th Cir.), *cert. denied*, 510 U.S. 932 (1993). In this court, we have not addressed this issue of whether the broader airline-passenger market could be further segmented into other fare-specific markets or instead whether the overall route profitability is the proper analysis.[1] Accordingly, I turn to the arguments of the parties presented in this case.

[1]As I discuss *infra*, despite Northwest's argument to the contrary, our opinion in *Directory Sales Management Corp. v. Ohio Bell Telephone Co.*, 833 F.2d 606 (6th Cir. 1987), does not stand for the proposition that we *must* evaluate Northwest's practices on a route-wide basis rather than a more segmented fare-specific analysis.

III. SPIRIT'S ARGUMENT

The crux of Spirit's complaint in this case is that in response to Spirit's entry into the two relevant geographic markets, Detroit to Boston ("DTW-BOS") and Detroit to Philadelphia ("DTW-PHL"), Northwest dropped its fares below its average variable cost and added capacity to drive Spirit out of the two markets. Moreover, Spirit alleges that shortly after it was forced out of the two markets, Northwest raised its fares to pre-predation levels to recoup its sacrificed profits. In support of its claim, Spirit presented expert reports from three notable economists, Professor Kenneth G. Elzinga, Dr. Daniel P. Kaplan, and Professor David E. Mills.

In his report, Professor Elzinga explained that the relevant market in which to evaluate Northwest's predation is that in which Spirit competed — namely, point-to-point travel on the two relevant geographic routes (hereafter "local" passengers). Thus, Professor Elzinga argues that Northwest's revenue generated from connecting passengers (passengers with destinations other than the origination and destination cities) should not be included in the analysis. Moreover, Spirit's strategy was directed only towards price-sensitive leisure travelers, because it offered only one to two flights a day, sold its tickets on a non-refundable basis, and did not offer first-class service, a frequent-flyer program, or onboard meals. Thus, Professor Elzinga argues that because Spirit did not compete with Northwest for local price-insensitive business travelers, those revenues should be excluded from any predation analysis as well. Instead, Professor Elzinga contends that the relevant market at issue should be limited to Northwest's actions in the local, price-sensitive passenger market.

Relying on Professor Elzinga's analysis of the relevant market, Dr. Kaplan evaluated the actual fares offered by Northwest in both the local market and the more specific, local, price-sensitive market. Dr. Kaplan then measured those fares against the average variable cost based on all passengers (including connecting passengers and price-insensitive passengers). Dr. Kaplan's rationale for using the average variable cost as determined by all passengers flown is that passenger-variable costs such as processing the ticket or beverage service do not vary materially between connecting and local passengers or price-sensitive and price-insensitive passengers. Moreover, by including all passengers flown, the average variable cost is lower than if the value was calculated just based on local price-sensitive passengers. Comparing Northwest's fares to the average variable cost, Dr. Kaplan concludes that both in the local market as a whole as well as the sub-market of price-sensitive passengers, Northwest charged fares below its average variable cost.

The last of Spirit's three expert witnesses, Professor Mills, argues that given the structure of the market at Detroit Metropolitan Wayne County Airport ("DTW"), Northwest could be reasonably assured of recouping profits it sacrificed during the predation period. Specifically, Professor Mills argues that because of its dominance at DTW and the scarcity of available gates for new entrants, Northwest could reasonably have expected not to face another entrant following Spirit's exit from the market. Accordingly, Professor Mills concludes that Northwest could have been reasonably confident that it could return to pre-predation prices to recoup profits sacrificed during predation. Having summarized Spirit's argument, I now turn to Northwest's response.

IV. NORTHWEST'S RESPONSE

Northwest's response to Spirit's experts is contained in the report of its own expert, Dr. Januz Ordover. Dr. Ordover challenges each of the premises of the arguments of Spirit's three experts. First, Dr. Ordover argues that Professor Elzinga improperly concluded that the relevant market at issue is something other than the total-passenger market on the two relevant geographic routes. Second, Dr. Ordover challenges Dr. Kaplan's price-cost analysis by arguing that it was error to compare a subset of passenger revenue with the average variable cost calculated for all

passengers. Finally, Dr. Ordover claims that Dr. Mills's recoupment analysis is flawed because it relies on several incorrect assumptions. I will briefly touch on each of Dr. Ordover's points.

With regard to Professor Elzinga's definition of the relevant market, Dr. Ordover argues that it is simply contrived to view the sub-segments of passengers which travel on the two relevant routes as separate markets. Dr. Ordover states that "[a]t the route level, this means that the airline must cover the costs of its operations on the route, and that at least on some of the routes in the system it must earn enough contribution in excess of the route-specific costs to cover the remaining costs of operating the airline." Joint Appendix ("J.A.") at 604 (Ordover Rebuttal Report at 9). Thus, Dr. Ordover concludes "[e]very airline attempts to cover these costs by striving to earn net contribution from all types of passengers on the route, not just the ones segmented out by the Plaintiff's experts." *Id.* Therefore, he argues that it is the *mixture of fares* from business travelers, leisure travelers, and connecting passengers, which the airline attempts to optimize to ensure profitability on each route.[2] For example, Dr. Ordover would argue that a below-cost leisure fare may be offset by a significantly higher above-cost business fare, but so long as the mix of revenue ensures profitability, the airline is behaving rationally.

With regard to Dr. Kaplan's price-cost analysis, Dr. Ordover faults Dr. Kaplan's comparison of local, price-sensitive fares to the average variable cost for *all* passengers. Dr. Ordover argues that because the vast majority of variable costs are common costs, it is simply arbitrary to allocate them equally among all the passengers. Instead, he would argue that the higher-priced fares should be allocated a higher percentage of the common-variable costs, while the lower-priced fares, such as the local, price-sensitive fares, should be allocated less. For example, Dr. Ordover would claim that there is no inherent reason why a business fare of $120 and a local leisure fare of $60 should be allocated the same share of common-variable costs, such as the pilot's salary. The effect of the uniform allocation of common-variable costs only serves to make one fare very profitable while the other is not. Instead, Dr. Ordover would argue that the appropriate way to measure costs for purposes of evaluating predatory pricing is to calculate the incremental average variable cost for the additional passengers generated by Northwest's low-fare campaign. Specifically, he explains that by taking the passenger-variable costs for the incremental passengers Northwest gained as a result of its low-fare campaign plus the common-variable costs associated *only with the additional capacity* Northwest added to the two routes during the campaign, divided by the total incremental passengers gained, gives a true measure of the variable costs of Northwest's pricing strategy. Dr. Ordover concludes by noting that the low fares which Northwest offered in response to Spirit were still above the incremental average variable cost for the additional passengers on both routes.

Finally, Dr. Ordover critiques Professor Mills's recoupment analysis. Specifically, Dr. Ordover disputes several of Professor Mills's assumptions upon which his analysis relies. A recoupment analysis determines whether it is plausible that the alleged predator would likely recover the profits it sacrificed during the predation period following the new entrant's exit from the business. Inherent in the analysis is reliance upon a number of key assumptions, such as what profits Northwest would have earned if Spirit had not entered the market. Dr. Ordover disputes Professor

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[2]Northwest argues in its brief that this issue has already been decided by Sixth Circuit precedent. Specifically, Northwest claims that our holding in *Directory Sales Management*, requires a court to look at an alleged predator's "operations taken as a whole." 833 F.2d at 614. I do not find this case to be on point. In *Directory Sales*, the two companies competed in the exact same market but the plaintiff attempted to isolate one portion within that market to demonstrate that the incumbent was predatorily pricing. *Id.* at 613. We held that the portion which the plaintiff identified was neither a separate product nor a separate market and that the plaintiff would need to show predatory pricing in the market as a whole. *Id.* at 614. Critical to our holding in that case was that the two companies' businesses were coextensive. By contrast, in this case, Spirit's service is not coextensive with Northwest's service. Spirit alleges that Northwest engaged in predatory pricing in the only market in which Spirit serves, i.e., local, price-sensitive passengers. If a reasonable trier of fact finds that such a distinct market exists, then Spirit has alleged a cognizable § 2 claim. Therefore, I conclude that our holding in *Directory Sales* does not apply.

Mills's assumptions about what fares Northwest would have charged absent Spirit's entry. Dr. Ordover also argues that Northwest did not expect that by simply matching Spirit's fares, Spirit would be forced out of the market. Finally, he explains that the barriers to entry at DTW were not sufficiently high as to prevent another competitor from entering the market once Spirit exited. Therefore, he argues Northwest could not reasonably expect to recoup any monopolist profits.

V. LEGAL ANALYSIS

Having studied the expert reports submitted in this case, I believe both sides have presented credible opinions, which are supported by evidence presented in the record. Specifically, a reasonable trier of fact could find that Spirit's experts have put forth a compelling argument that Northwest did engage in predatory pricing in the limited market in which Spirit competed that eventually forced Spirit out of the market. In addition, a reasonable trier of fact could conclude instead that the relevant market must be viewed as the route itself and that predation cannot be measured by just one type of fare. As we have stated, however, determination of the relevant product market is an issue for the jury to decide. *See Lewis v. Philip Morris Inc.*, 355 F.3d 515, 533 (6th Cir.) (holding that the definition of the relevant product market "is a factual inquiry for the jury; the court may not weigh evidence or judge witness credibility") (internal quotation omitted), *cert. denied*, 125 S. Ct. 61 (2004).

Moreover, even if the relevant market is found to be price-sensitive leisure passengers, disputes exist regarding whether Northwest priced its fares in that market below average variable cost and whether recoupment was a plausible strategy. Thus, a reasonable trier of fact could find either that Dr. Kaplan demonstrated that Northwest's matching fares were below its average variable cost or instead could agree with Dr. Ordover's opinion as to the correct formulation of variable costs. In addition, a reasonable trier of fact could find that Professor Mills had persuasively explained that recoupment was plausible or instead could adopt Dr. Ordover's reasoning that the assumptions upon which Spirit relied were flawed.

In sum, because I find that both parties' expert opinions were reasonable, supported by evidence in the record, and could each be found persuasive by a reasonable trier of fact, I conclude the district court erred in granting Northwest summary judgment in this case. Specifically, the district court erred in adopting Northwest's expert analysis over the one presented by Spirit. Like the majority opinion, I believe that the parties' "competing expert opinions present the 'classic battle of the experts' and it [is] up to a jury to evaluate what weight and credibility each expert opinion deserves." *Phillips v. Cohen*, 400 F.3d 388, 399 (6th Cir. 2005) (internal quotation omitted) (alteration in original). At the summary judgment stage of a case, the district court should not weigh the evidence or judge the credibility of witnesses. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) (holding that "[c]redibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge, [when] he is ruling on a motion for summary judgment"). Accordingly, I concur with my colleagues that the decision of the district court should be reversed and the case should be remanded for further proceedings.