UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, et al., **Plaintiffs,** **v.** **AETNA INC., et al.,** **Defendants.**	**Civil Action No. 16-1494 (JDB)**

MEMORANDUM OPINION

INTRODUCTION

Before the Court is an antitrust challenge to the merger of Aetna Inc. and Humana Inc., two of the largest health insurance companies in the country. Aetna and Humana entered into a merger agreement on July 2, 2015. They subsequently provided notification of their planned merger to the Department of Justice as required by the Hart-Scott-Rodino Antitrust Improvements Act of 1976, 15 U.S.C. § 18a. Following an investigation, the Department of Justice, eight states, and the District of Columbia (collectively, the government) filed this action asserting that the merger "may . . . substantially . . . lessen competition" in violation of section 7 of the Clayton Act, 15 U.S.C. § 18, in two distinct product lines: individual Medicare Advantage plans and individual commercial health insurance plans offered on the public exchanges. The government identified 364 counties across 21 states where it argues that concentration in the Medicare Advantage market would rise above the presumptively unlawful level if the merger proceeds, and 17 counties across 3 states where that would be true in the public exchange markets. Moreover, the government argues, additional evidence indicates that the companies compete head-to-head in both markets—competition that would be lost following the merger, to the significant detriment of consumers.

Unsurprisingly, Aetna and Humana disagree. For Medicare Advantage, they argue that the relevant product market must include both Original Medicare (Medicare benefits offered directly by the government) as well as Medicare Advantage (Medicare benefits offered by private insurance entities). In this market, properly defined, Aetna and Humana argue that post-merger concentration would not be high enough to be presumptively unlawful. Furthermore, they offer three reasons why, even in a market limited to Medicare Advantage, the proposed merger would not substantially lessen competition. According to defendants, the government's regulatory authority over Medicare Advantage, the threat of entry by new competitors, and defendants'

proposed divestiture of a portion of their Medicare Advantage business to another insurance company, Molina Healthcare, Inc., would combine to render any competitive harm unlikely.

In response to the government's public exchange allegations, Aetna and Humana argue that there is no current competition between the two companies in the 17 complaint counties, because Aetna has decided not to compete in those counties in 2017. If there is no current competition between them, they argue, there can be no substantial lessening of that competition post-merger. Alternatively, they argue that even if the Court looks back to the competition between Aetna and Humana in 2016 and predicts future competition on that basis, it is likely that Humana's market share in the public exchanges will be so reduced in 2017 and later years that a merger would not increase market concentration to a presumptively unlawful level.

Additionally, Aetna and Humana argue that the efficiencies created by the merger and then passed on to consumers would counteract any anticompetitive effects in both the Medicare Advantage and public exchange markets.

The government responds that the relevant product market is indeed Medicare Advantage only, and that none of these arguments is sufficient to rebut the presumption of unlawfulness based on the levels of market concentration and the evidence that Aetna and Humana compete head-to-head in both markets. In the public exchange context, the government contends that Aetna decided not to compete in the 17 complaint counties in 2017 in response to this litigation in an effort to evade judicial review of the merger. Thus, the government argues, the Court should ignore this manipulation and instead analyze the competitive effects of the proposed merger as if Aetna planned to continue competing in the public exchanges in all of the 17 complaint counties as it did in 2016.

The Court concludes that the proposed merger is likely to substantially lessen competition in Medicare Advantage in all 364 complaint counties and in the public exchanges in the three complaint counties in Florida. Aetna and Humana compete in a Medicare Advantage product market that does not include Original Medicare, as both contemporary business documents and econometric evidence confirm. In that market, which is the primary focus of this case, the merger is presumptively unlawful—a conclusion that is strongly supported by direct evidence of head-to-head competition as well. The companies' rebuttal arguments are not persuasive.

In the public exchanges, the Court finds that Aetna withdrew from competing in the 17 complaint counties for 2017 specifically to evade judicial scrutiny of the merger. Although the Court does not adopt the government's view that this means the Court should assume that Aetna will continue to compete everywhere it competed in 2016, the Court will give Aetna's withdrawal decision for 2017 little weight in predicting where Aetna will compete in later years. The Court finds that Aetna is likely to offer plans on the exchanges only in the three complaint counties in Florida in 2018 and beyond, and that the merger is likely to substantially lessen competition in those counties. And as in the Medicare Advantage market, the Court concludes that defendants' proffered efficiencies do not offset the anticompetitive effects of the merger.

BACKGROUND

I. The Parties and Proposed Merger

Aetna and Humana are large health insurance companies with national footprints. Both offer a range of health insurance products, including the two products at issue in this litigation: individual Medicare Advantage plans and individual insurance sold on the public exchanges. Both are also regarded by industry participants as members of the "Big 5" health insurers, along with competitors UnitedHealth, Anthem, and Cigna.

Humana is "viewed as a leader in Medicare Advantage." Tr. 1837:22–23 (Broussard). [1] In 2016, Humana was one of the two largest Medicare Advantage insurers, boasting more than 2.5 million individual Medicare Advantage members.[2] PX0551 (Nevo Report) ¶ 40. Humana's Medicare Advantage offerings are available to 91% of Medicare beneficiaries nationally. Tr. 253:6–7 (Cocozza). Humana's position atop the Medicare Advantage market has been obtained through impressive recent growth. Between 2013 and 2016, Humana added more seniors to its individual Medicare Advantage plans than any of its rivals. PX0551 (Nevo Report) ¶ 40.

Aetna, although historically oriented more toward the sale of commercial health insurance, has also been growing rapidly in Medicare Advantage. In the last four years, Aetna has expanded its Medicare Advantage plans into 640 new counties; the next most aggressive entrant entered into less than half that many. PX0551 (Nevo Report) ¶ 218 & Ex. 18. Some of Aetna's momentum was derived from its 2013 acquisition of Coventry Health Care, itself a significant player in Medicare Advantage. Tr. 1330:20–1331:1 (Bertolini). Now the fourth-largest seller of individual Medicare Advantage in the country, Aetna has plans for continued rapid growth. Today, Aetna plans are available to approximately 50% of Medicare beneficiaries; within five years, through continued geographic expansion, Aetna hopes to increase that figure to 70%. Tr. 1331:2–22 (Bertolini).

[1] Citations to the trial transcript include the witness's last name in parenthesis. Where exhibits are cited with page numbers, the page number refers to the last three digits of the exhibit-stamp page number, where available. For example, Plaintiffs' Exhibit 100 at page 1 is cited as "PX0100-001." If that pagination is not available, the last three digits of the Bates-stamp number are used. Expert reports are cited by paragraph number, where available.

[2] Based on a measure of enrollment that excludes group Medicare Advantage plans sold to employers, the government's economist, Dr. Aviv Nevo, asserted that Humana was the largest individual Medicare Advantage insurer in the country. Humana's answer admits only to being the second-largest Medicare Advantage insurer, without any reference to "individual" Medicare Advantage. See Humana's Answer [ECF No. 63] ¶ 7. For present purposes, it is not necessary to resolve this discrepancy. It is enough to observe that Humana has been a very large and successful player in the individual Medicare Advantage market—whether or not it is technically the largest one.

Aetna and Humana are also two of the largest insurers in the individual commercial insurance market on the public exchanges. The exchanges, created by the Affordable Care Act, create a marketplace where individuals who do not receive health insurance through their employer or through a government program can purchase individual insurance plans. At the time the complaint was filed, Aetna sold insurance on the public exchanges in 15 states and had described itself as being "highly successful" in enrollment. See Tr. 1360:14–17 (Bertolini); PX0285 at 4. Humana also offered plans in 15 states in 2016, and planned to continue offering insurance on the exchanges in 11 states for 2017. See Humana Ans. [ECF No. 63] ¶ 42. The two companies competed on the public exchanges in more than 100 counties.

On July 2, 2015, Aetna and Humana announced their merger agreement, under which Aetna would acquire Humana for $37 billion. The firms' respective CEOs, Mark Bertolini and Bruce Broussard, both expressed excitement about the merger's potential. They believe that the merger will combine two philosophically compatible firms—both focused on providing individualized, value-based care in local communities—into one that can more effectively implement their shared vision for the future of healthcare. See Tr. 1399:17–1401:19 (Bertolini); Tr. 1838:5–1840:19 (Broussard). Although the companies are enthusiastic about their merger, they have also planned for the possibility that it will not occur. If it is not consummated by a specified date—now February 15, 2017—then Aetna must pay Humana a $1 billion break-up fee.

The government imputes a different rationale to the Aetna-Humana transaction, seeing it as part of "an industry-wide rush to consolidate." Pls.' Proposed Findings & Conclusions [ECF No. 275] at 7. Industry participants, including Bertolini, have indeed referred to a "merger frenzy" among health insurers in recent years. Tr. 1319:24–1320:3 (Bertolini). The "frenzy" culminated with the announcements of this merger and another between Anthem and Cigna. That would

combine four of the five largest health insurers into two companies. But in the run-up to those announcements, the Big 5 insurers had explored a number of different merger possibilities: on at least two occasions, UnitedHealth had approached Aetna about a potential acquisition, and on other occasions Aetna had made indirect inquiries about acquiring Cigna. See Tr. 1321:8–1322:17 (Bertolini). This degree of merger-related activity, the government contends, tends to undercut the notion that there is something particularly valuable about the Aetna-Humana transaction.

Ultimately, of course, the outcome of this case does not hinge on these competing characterizations of the merger. Instead, as the parties recognize, the outcome here must depend on a detailed analysis of the likely effects of the merger in the challenged markets. The best place to begin that analysis is with a summary of the government programs central to this case: Original Medicare, Medicare Advantage, and the public exchanges created by the ACA.

II. Original Medicare and Medicare Advantage

Individuals aged 65 or over are eligible for Medicare, through which the federal government provides certain health insurance benefits to seniors. The core of the program is Medicare Parts A and B. Part A covers inpatient hospital services; Part B covers doctors' services and outpatient care. See PX0553 (Frank Report) ¶¶ 17, 18. Together, Medicare Parts A and B are often called "Original Medicare." Under Original Medicare, healthcare providers are paid on a fee-for-service basis. When a healthcare provider performs a particular service, it is paid by the government according to a fee schedule determined by the Center for Medicare and Medicaid Services (CMS), an office within the Department of Health and Human Services (HHS). Original Medicare enrollees may obtain care from any healthcare provider that accepts Original Medicare rates. Because the overwhelming majority of providers do so, seniors who enroll in Original Medicare can effectively obtain care from any provider, anywhere in the country.

But Original Medicare does not cover the full cost of seniors' medical care. For example, in 2016 Part A included a $1,288 per year inpatient hospital deductible. PX0553 (Frank Report) ¶ 17. Part B likewise comes with some out-of-pocket costs. Last year, Original Medicare enrollees paid monthly Part B premiums of about $105. PX0553 (Frank Report) ¶ 19. They also paid a deductible of $166 per benefit period, and a 20% coinsurance rate for most covered services. PX0553 (Frank Report) ¶ 18. Moreover, Original Medicare does not cover the cost of the outpatient prescription drugs prescribed by many providers and taken by many seniors. Tr. 110:4–9 (Frank). Collectively, these premiums, deductibles, coinsurance payments, and drug prescription payments may impose significant medical costs on an Original Medicare enrollee—but Original Medicare places no cap on such out-of-pocket expenses. PX0553 (Frank Report) ¶ 19.

To contain those possibly significant out-of-pocket costs, many seniors purchase a Medicare Supplement (known as "MedSupp" or "Medigap") plan from a private insurer.[3] These plans are regulated by state departments of insurance and sold by private insurers in a number of standardized varieties, each denoted by a letter. Tr. 728:4–8 (Wooldridge); DX0130-83. One of the most popular varieties, called a MedSupp Plan F, covers 100% of an Original Medicare enrollee's deductibles and copayments, with no out-of-pocket limit, in exchange for a monthly premium of about $150. See DX0130-83; Tr. 671:8–10 (Wooldridge). But MedSupp plans do not offer coverage for prescription drugs. Tr. 105:23–106:1 (Frank). To obtain prescription drug coverage, an Original Medicare enrollee must purchase a Medicare Part D plan from a private

[3] Before purchasing a MedSupp plan, some seniors may be subject medical underwriting. Depending on their answers to a health questionnaire, some seniors—like those with certain pre-existing conditions—may ultimately be denied MedSupp coverage. Tr. 106:11–17 (Frank); Tr. 429:9–17 (Cocozza). But when a senior has "guaranteed issue rights," he or she cannot be subject to medical underwriting. Seniors have "guaranteed issue rights" when they age into Medicare for the first time, if their Medicare Advantage plan recently withdrew from the market, or if they move out of the coverage area of their Medicare Advantage plan. Tr. 430:8–22 (Cocozza); Tr. 722:13–20 (Wooldridge).

insurer. PX0553 (Frank Report) ¶ 22. The average Part D premium is $39 per month. PX0553 (Frank Report) ¶ 22.

Rather than enrolling in Original Medicare (with or without a MedSupp or Part D plan), a senior may choose to enroll in a Medicare Advantage plan sold by a private insurer. Under the Medicare Advantage program, which was created in approximately its current form by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108–173, 117 Stat. 2066, private insurers are paid by the government to provide health insurance to Medicare-eligible seniors. Participating insurers enter into contracts with CMS; then, pursuant to each contract, the insurers can offer a number of Medicare Advantage plans to seniors. The Medicare Advantage program was intended to "[e]nrich the range of benefit choices available to enrollees" and to "increase[e] efficiency in the overall health care system." Final Rule, Establishment of the Medicare Advantage Program, 70 Fed. Reg. 4,588 (Jan. 28, 2005). To achieve those goals, Medicare Advantage harnesses "open season competition" between Medicare Advantage plans. Id.

This competition occurs within parameters set by the federal government. By statute, all Medicare Advantage plans must provide coverage for Medicare Parts A and B. Additionally, unlike Original Medicare, Medicare Advantage plans must cap an enrollee's out-of-pocket spending at $6,700 per year. Tr. 107:12–17 (Frank). The federal government, through CMS, also oversees the annual Medicare Advantage bid process, which is used to determine how much a Medicare Advantage organization (MAO) will be paid by the government. The starting point for that calculation is the CMS "benchmark." Each April, CMS publishes a "benchmark" for every county in the United States, based on the cost to Original Medicare of providing Part A and B benefits to an average enrollee in that county in the prior year. PX0553 (Frank Report) ¶ 27. The

benchmark represents the maximum amount that the government will pay an MAO to provide Original Medicare benefits to an enrollee in a particular county. MAOs are thus paid on a capitated basis, not on a fee-for-service basis: CMS will not pay the MAO more for seniors who consume more healthcare services. Accordingly, the capitation payment provides MAOs with an incentive to control their enrollees' healthcare costs.

For each Medicare Advantage plan, the MAO submits a "bid" against the benchmark. If an MAO bids above the benchmark, it will be paid the benchmark rate for each enrollee. Those seniors who enroll in that plan must pay a premium equal to the difference between the bid and the benchmark. PX0553 (Frank Report) ¶ 28. But if an MAO is confident about its ability to control costs, and to thereby provide Part A and B benefits to its enrollees for less than Original Medicare, it might submit a bid below the benchmark. In that case, the MAO will be paid its bid, plus an additional amount sometimes called the "rebate." PX0553 (Frank Report) ¶ 29. The rebate is calculated as a percentage of the difference between the bid and the benchmark. The remainder of the difference is retained by CMS as a benefit for taxpayers. PX0553 (Frank Report) ¶ 29. Any rebates earned by the MAO must be used to lower out-of-pocket costs or increase benefits for the plan's enrollees. PX0553 (Frank Report) ¶ 30. Many MAOs use rebates to lower enrollees' Part B premiums, to reduce the plan's cost sharing requirements (that is, copays, coinsurance, or deductibles), or to add benefits that are not available through Original Medicare, such as vision, dental, hearing, or fitness benefits (known as "silver sneakers" benefits).

The amount of an MAO's capitation payment also depends in part on "star ratings." Ranging in half-star increments between one and five, star ratings are intended to be a comprehensive measure of plan quality, reflecting factors like clinical outcomes, patient satisfaction, and access to care. See PX0553 (Frank Report) ¶ 31; PX0551 (Nevo Report) ¶ 68 &

n.97. CMS assigns star-ratings at the contract level; thus, all the plans under a particular contract between CMS and an MAO will have the same star rating. Tr. 618:6–13 (Wheatley). Star ratings directly affect the amount of an MAO's capitation payment in two ways. First, plans with higher star ratings bid against a higher benchmark. Plans rated with four or more stars can bid against an amount that is 105% of the normal county benchmark. PX0553 (Frank Report) ¶ 32. Second, higher-rated plans earn higher rebates in percentage terms. For example, a plan with 3 stars or below receives as a rebate 50% of the difference between the bid and the benchmark; a plan with 4.5 stars receives 70% of that difference. PX0553 (Frank Report) ¶ 32. Star ratings, therefore, attempt to reinforce the relationship between plan quality and competitive success—high quality plans achieve high star ratings; high star ratings increase benchmarks and rebates; increased benchmarks and increased rebates are used to make plans more attractive; and more attractive plans translate into higher enrollment.

The Medicare Advantage plans that emerge from the CMS bidding system tend to share a number of characteristics. The most fundamental of these is that, unlike Original Medicare, Medicare Advantage plans tend to be managed care plans with limited provider networks. Faced with the need to bid below the CMS benchmark, Medicare Advantage organizations, including Aetna and Humana, strive to build networks of providers who will work with them to coordinate patient care and control healthcare costs.[4] See Tr. 421:21–422:3 (Cocozza); Tr. 543:21–25 (Wheatley). In some cases, these relationships are rooted in value-based contracts, which pay

[4] Health maintenance organizations (HMOs) and preferred provider organizations (PPOs) are both types of limited-network plans. HMOs typically require seniors to obtain a referral from their primary care physician before seeing a specialist. This is sometimes described as the primary care physician serving as a "gatekeeper." With limited exceptions, HMOs also do not reimburse seniors for care they receive outside their provider network. PPOs are usually somewhat less restrictive. PPOs generally do not require seniors to obtain a referral before seeing a specialist and will provide partial—but generally not full—reimbursement for care received outside the provider network.

providers based on various measures of care quality and patient outcomes rather than on the amount of care that they provide. Tr. 435:1–6 (Cocozza); Tr. 549:6–15 (Wheatley).

When these cost-control efforts are successful, MAOs funnel the savings back into their plans in the form of reduced out-of-pocket costs or additional benefits. For example, in 2016, 61% of Medicare Advantage plans included annual limits on an enrollee's out-of-pocket spending that were less than the statutory cap of $6,700. PX0551 (Nevo Report) ¶ 54. That same year, about half of Medicare Advantage enrollees were in zero-premium plans, meaning that they paid no premium other than the standard Part B premium. PX0348 at 7. On the benefits side, 89% of Medicare Advantage plans included prescription drug benefits, which must be purchased separately by enrollees in Original Medicare. PX 551 (Nevo Report) ¶ 55. Many Medicare Advantage plans also offer vision, dental, hearing, or fitness benefits that are unavailable through Original Medicare. Tr. 107:21–25 (Frank). Together, these features—limited networks, coordinated care, out-of-pocket maximums, and supplemental benefits—drive the Medicare Advantage value proposition.

But Medicare Advantage plans do not appeal to everyone. In fact, for as long as Medicare Advantage has existed, a majority of seniors have selected Original Medicare (often with a MedSupp and Part D plan) instead. Most seniors first choose during a seven-month initial election period surrounding their 65th birthday. Those who fail to make a timely choice between the two default into Original Medicare. Tr. 408:2–7 (Cocozza). Each year, seniors may re-evaluate their choice during an annual enrollment period running from October 15 to December 7. During that period, "any [Medicare] beneficiary can make a different election for the upcoming year." Tr. 418:3–5 (Cocozza). Seniors are thus free to switch from Original Medicare to Medicare Advantage or vice-versa, or from one Medicare Advantage plan to another. Seniors may also

switch from Medicare Advantage to Original Medicare during another annual window, running from January 1 to February 14. During that period, however, seniors may not switch out of Original Medicare or between Medicare Advantage plans. DX0130-077.

Medicare Advantage plans are subject to CMS regulation applied primarily in connection with the bid process. Each insurer must submit a bid for every Medicare Advantage plan it intends to offer the following year. In April, along with the county benchmarks, CMS publishes two documents: a "call letter" describing the terms of the Medicare Advantage program, and a set of instructions about bid submission. See DX0014 (call letter); DX0349 (bid instructions). These documents impose a number of requirements on MAOs. Some, like the limit on increases in "total beneficiary cost," relate directly to plan pricing. CMS will deny bids when "it determines the bid proposes too significant an increase in cost sharing or decrease in benefits from one plan year to the next." DX0014-163. For plan year 2017, CMS maintained the total beneficiary cost threshold at $32 per member per month. DX0014-165. Bids proposing increases in amounts greater than the threshold were subject to denial. But even bids complying with the threshold were not necessarily free from scrutiny, because "CMS reserves the right to further examine and request changes to a plan bid even if a plan's [total beneficiary cost] is within the required amount." DX0014-164. Sean Cavanaugh, the Director of the Center for Medicare, the office within CMS that regulates Medicare Advantage, was not aware of any bids being rejected for violation of the rules on total beneficiary costs during his tenure. Tr. 1144:12–25 (Cavanaugh); see also Tr. 453:9–10 (Cocozza). Instead, CMS typically informs the MAO of the violation, and the MAO revises the bid into compliance. Tr. 1146:12–20 (Cavanaugh). Even then, however, the MAO may still be the subject of a CMS compliance notice. Tr. 1942:8–17 (Paprocki).

Some provisions of the bid instructions relate to MAO margins. The MAO must forecast the margin that it expects to earn on each of its plans. At the individual bid level, CMS seeks to guarantee that bids "provide benefit value in relation to the[ir] margin level[s]." DX0349-027. But most margin restrictions are "Aggregate-Level Requirements" that apply above the bid level. DX0349-028. Each bid is made at the plan level; each plan is part of a contract between CMS and the legal entity offering the plan; and most contracts cover multiple plans—perhaps as many as fifty. See Tr. 2008:12–21 (Paprocki). Some legal entities also have multiple contracts. Tr. 2572:10–15 (Coleman). Above all these bids, contracts, and legal entities sit parent organizations, like Aetna and Humana, which might have multiple contracts with CMS through multiple affiliated legal entities. See Tr. 1948:2–12, 2008:10–11 (Paprocki). CMS regulation allows MAOs to decide whether to apply the aggregate-level margin requirements at the level of the contract, the legal entity, or the parent organization. DX0349-028; see also Tr. 2004:16–20 (Paprocki).

The bid instructions require that the aggregate margins forecasted for the coming plan year are consistent with the actual ones from previous years. DX0349-029. And the aggregate margins that an MAO forecasts for its Medicare Advantage business must be within 1.5% of the margins on its overall business. DX0349-029. Aetna applies this requirement at the parent organization level, the highest level of aggregation permitted by CMS rules. Tr. 2004:16–2005:5 (Paprocki).

Finally, outside of the bid process, CMS imposes limits on an MAO's "medical loss ratio." By statute, MAOs must spend at least 85% of the revenue obtained through a particular contract with CMS on medical services. See 42 U.S.C. § 1395w-27(e)(4); Tr. 1147:2–6 (Cavanaugh). Like the margin rules, the medical loss ratio regulations are applied above the level of individual bids—here, at the contract level. But unlike the margin rules, they apply retroactively to actual results rather than prospectively to forecasts. If CMS determines that, pursuant to a particular contract in

a particular year, an MAO spent less than 85% of its revenue on medical costs (meaning that it kept more than 15% of its revenue as profit or to cover administrative costs), CMS can require the MAO to refund the excess amount to beneficiaries. An MAO that remains out of compliance for three consecutive years may be barred from enrolling new members. Tr. 1148:6–13 (Cavanaugh). So far, however, no such penalties have been imposed. The medical loss ratio rules were introduced to Medicare Advantage by the Affordable Care Act, and CMS is only now preparing to release the first year of medical loss data. Tr. 1148:14–17 (Cavanaugh).

III. The Public Exchanges

The ACA created the public exchanges as online marketplaces where consumers could purchase health insurance. Tr. 2638:24–2639:14 (Counihan); PX0553 (Frank Report) ¶ 73. (The exchanges are sometimes referred to as "Health Insurance Exchanges," or "HIX" in the record. Tr. 1486:11–12 (Lynch)). Their basic structure is uncontested. The exchanges first opened in 2013 for consumers to purchase plans for the 2014 year. See Tr. 138:21–139:25 (Frank). Individuals who do not receive health insurance through some other means—such as through their employer or through a government program like Medicare, Medicaid, or Tricare—are required to purchase health insurance or pay a tax, sometimes referred to as a penalty. PX0553 (Frank Report) ¶ 73. These individuals may purchase health insurance through the public exchanges (on-exchange) or directly from an insurer or a broker (off-exchange). PX0551 (Nevo Report) ¶ 271. Health insurers who offer plans on-exchange in a given state must offer the same plans off-exchange in that state. Tr. 1532:15–1533:3 (Mayhew). However, health insurers may offer products off-exchange that they do not offer on-exchange. Tr. 1533:4–10 (Mayhew). CMS, along with each state, has oversight responsibility for the exchanges. Tr. 2587:22–2588:2 (Counihan).

The ACA also created certain obligations for insurers who offer plans on the exchanges. For example, insurers may not deny coverage based on preexisting conditions, or charge a different premium based on an individual's perceived health status. Tr. 141:6–8 (Frank); PX0553 (Frank Report) ¶ 73. On-exchange plans are grouped into five tiers based on the level of coverage they provide: there are four "metal" tiers (bronze, silver, gold, and platinum) and there is one catastrophic tier. Tr. 1674:14–19 (Nevo). The "metal" tiers are based on the percentage of total expected healthcare spending the plan covers. Bronze plans cover 60% of expected healthcare spending, silver plans cover 70%, gold plans 80%, and platinum plans 90%. Tr. 142:8–13 (Frank).

Individuals who purchase insurance on-exchange and who earn less than 400% of the federal poverty level are generally eligible to receive subsidies. Tr. 143:10–18 (Frank); PX0553 (Frank Report) ¶¶ 82–83; 26 C.F.R. § 601.105, IRS Revenue Procedure 2016-24, § 2.01. These subsidies vary by location and income level, and can take the form of both premium subsidies and reductions in cost-sharing payments (that is, deductibles, copayments, and coinsurance). Tr. 143:10–18 (Frank); PX0553 (Frank Report) ¶¶ 82–83. The subsidies are provided as tax credits, and are tied to the cost of the second lowest-cost silver plan in the individual's geographic region. Tr. 143:5–9 (Frank). Because the silver plans are the most cost-effective—given the subsidy—approximately 70% of individuals choose silver plans. Tr. 2631:20–2632:7 (Counihan); Tr. 142:14–21 (Frank). Approximately 85% of all individuals who purchase insurance on the exchanges receive a subsidy. Tr. 144:6–8 (Frank); Tr. 1546:24–1547:4 (Mayhew). And because the amount of the subsidy is tied to the price of on-exchange plans, higher premiums increase the cost both to the consumer and the taxpayer. See Tr. 140:23–141:1 (Frank).

IV. Procedural History

On July 21, 2016, the United States, along with Delaware, the District of Columbia, Florida, Georgia, Illinois, Iowa, Ohio, Pennsylvania, and Virginia, filed a complaint seeking to permanently enjoin the Aetna-Humana merger.[5] See Compl. [ECF No. 1] ¶ 69. The government alleged that the transaction violates Section 7 of the Clayton Act, 15 U.S.C. § 18, because its effect "may be to substantially lessen competition" in a number of markets: (1) the market for individual Medicare Advantage plans in 364 counties across 21 states; and (2) the market for individual insurance sold on the public exchanges in 17 counties across three states (Florida, Georgia, and Missouri). In the government's estimation, the merger would adversely affect 1.6 million people in Medicare Advantage and 700,000 more in the public exchanges. See Compl. ¶¶ 10, 12.

In the weeks following the government's complaint, the companies took steps that introduced additional issues into the case. First, on August 2, 2016, Aetna and Humana each entered into a separate Asset Purchase Agreement with Molina Healthcare, under which they have agreed to sell Molina some of their Medicare Advantage plans if their merger is consummated and if the Court believes that a divestiture is necessary to counteract the merger's anticompetitive effects. The proposed divestiture would transfer responsibility for approximately 290,000 seniors from Aetna or Humana to Molina, and would include seniors in all 364 complaint counties. Second, on August 15, 2016, Aetna announced that it no longer planned to offer plans on the public exchanges in 11 states where it had offered plans in 2016, including those that cover all 17 counties in the complaint. See Tr. 1360:14–16 (Bertolini); PX0133; DX0031. The motivation for—and legal consequence of—Aetna's decision to withdraw have been sharply disputed by the parties.

[5] On the same day, the government filed a second complaint seeking to enjoin the Anthem-Cigna merger, citing alleged anticompetitive effects in markets that are mostly different than those at issue here. See Compl., Case No. 16-1493 [ECF No. 1]. Because the government filed the cases as related, both were initially assigned to this judge. The Court held a joint status conference on August 4, 2016. After concluding that the cases did not raise enough common issues to be truly related, and that the public would be better served if these complex and important cases seeking expedited relief were assigned to different judges, the Court referred the Anthem-Cigna merger for random reassignment. See Aug. 5, 2016, Order [ECF No. 39].

In the months preceding the trial, the parties exchanged millions of documents, conducted dozens of depositions, and generally worked together in a collaborative and professional manner. They were greatly aided in those efforts by the court-appointed Special Master, retired Judge Richard A. Levie, who facilitated a smooth discovery process and helped make the compressed timeline in this case feasible. In late October and early November, the parties submitted their expert reports—sixteen in all, totaling more than a thousand pages—for the Court's review. They also submitted helpful pretrial briefs previewing the evidence and arguments at trial. During the final week before trial, the Court, Judge Levie, and the parties worked to resolve any outstanding evidentiary or confidentiality issues. A final pretrial conference was held on December 2, with trial set to begin on December 5, 2016.

The trial began on schedule and lasted for 13 trial days. The Court received hundreds of exhibits addressing the businesses of Aetna, Humana, and Molina; their plans for the merger and divestiture; their dealings with CMS; and several other topics. The Court also heard testimony from more than thirty helpful and knowledgeable witnesses, including executives and employees from Aetna, Humana, and Molina; officials from CMS; and independent brokers. The parties also put forward a number of distinguished experts to testify on a variety of subjects. Dr. Richard Frank, formerly the Assistant Secretary for Planning and Evaluation at HHS, provided testimony on the role of competition in both Medicare Advantage and the public exchanges. Dr. Gary Ford testified about survey design and, in particular, the value of an internal survey conducted by Humana regarding which insurance options seniors leaving Humana Medicare Advantage plans choose. Dr. Lawton Burns testified about the Molina divestiture. Two experts, Rajiv Gohkale and Christine Hammer, provided testimony on the efficiencies that might result from the Aetna-Humana merger. And finally, economists Dr. Aviv Nevo and Jonathan Orszag provided

compelling, detailed, and—most importantly—comprehensible testimony on the probable economic effects of the merger. The Court is appreciative of all these witnesses, and of the attorneys who elicited their testimony.

On December 29, 2016, the parties submitted their proposed findings of fact and conclusions of law. The following day, on December 30, the Court heard final argument over several hours. Now, having carefully considered all of the evidence and the parties' arguments, the Court has reached the following conclusions.

LEGAL STANDARD

Section 7 of the Clayton Act prohibits mergers "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. Two aspects of the statutory text are worth highlighting. First, by using the word "may," Congress indicated that its "concern was with probabilities, not certainties." Brown Shoe Co. v. United States, 370 U.S. 294, 323 (1962). Hence, mergers with "probable anticompetitive effect[s]" are prohibited by the Clayton Act. Id. The government need not prove the alleged anticompetitive effects "with 'certainty.'" FTC v. H.J. Heinz Co., 246 F.3d 708, 719 (D.C. Cir. 2001). Second, the Clayton Act protects "competition," rather than any particular competitor. United States v. Baker Hughes Inc., 908 F.2d 981, 991 n.12 (D.C. Cir. 1990). To assess a merger's probable effect on competition, the Court must undertake a "comprehensive inquiry" into the "future competitive conditions in a given market." Id. at 988.

D.C. Circuit precedent creates a burden-shifting framework to guide that inquiry, which generally begins with defining a relevant antitrust market. Id. at 982–83; see, e.g., FTC v. Sysco Corp., 113 F. Supp. 3d 1, 24 (D.D.C. 2015); United States v. H&R Block, Inc., 833 F. Supp. 2d

36, 50 (D.D.C. 2011). If the government can "show that the merger would produce a firm controlling an undue percentage share of the relevant market, and would result in a significant increase in the concentration of firms in that market," that creates "a presumption that the merger will substantially lessen competition." Heinz, 246 F.3d at 715 (internal quotation marks and alterations omitted). By making such a showing, the government "establish[es] a prima facie case of anticompetitive effect." Baker Hughes, 908 F.2d at 983.

To rebut this presumption, "defendants must produce evidence that shows that the market-share statistics give an inaccurate account of the merger's probable effects on competition in the relevant market." Heinz, 246 F.3d at 715 (internal quotation marks and alterations omitted). "[E]vidence on a variety of factors can rebut a prima facie case." Baker Hughes, 908 F.2d at 984. For example, defendants may produce evidence concerning the "ease of entry into the market, the trend of the market either toward or away from concentration," the "continuation of active price competition," or "unique economic circumstances that undermine the predictive value of the government's statistics." Heinz, 246 F.3d at 715 n.7 (internal quotation marks omitted); see also Baker Hughes, 908 F.2d at 985–86 (listing additional factors that can rebut the government's prima facie case). But the "more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully." Baker Hughes, 908 F.2d at 991.

"If the defendant successfully rebuts the presumption of illegality, the burden of producing additional evidence of anticompetitive effect shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times." Heinz, 246 F.3d at 715 (internal quotation marks and alterations omitted). The government "has the ultimate burden of proving a Section 7 violation by a preponderance of the evidence." H&R Block, 833 F. Supp. 2d at 49 (internal quotation marks omitted).

ANALYSIS

I. Medicare Advantage

A. Market Definition

Only an "examination of [a] particular market—its structure, history and probable future—can provide the appropriate setting for judging the probable anticompetitive effect of [a] merger." United States v. Gen. Dynamics Corp., 415 U.S. 486, 498 (1974) (internal quotation marks omitted). The first question in this case is about the proper boundaries of that "particular market." Antitrust markets have two dimensions: product and geographic area. FTC v. Arch Coal, Inc., 329 F. Supp. 2d 109, 119 (D.D.C. 2004). The parties here agree that the relevant geographic market is the county.[6] But they sharply dispute the boundaries of the relevant product market. Is the market properly limited to individual Medicare Advantage plans, as the government contends? Or are defendants correct that Original Medicare options—meaning Original Medicare paired with a MedSupp and/or a prescription drug plan—should also be included in the market?

"The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." Brown Shoe, 370 U.S. at 325. Both aspects of the Brown Shoe test "look to the availability of substitute commodities, i.e. whether there are other products offered to consumers which are similar in character or use," and "how far buyers will go to substitute one commodity for another." FTC v. Staples, Inc., 970 F. Supp. 1066, 1074 (D.D.C. 1997). "[T]he mere fact that a [product] may be termed a competitor in the overall marketplace does not necessarily require that it be included in the relevant product market for antitrust purposes." Id. at 1075. Markets "must be drawn narrowly to exclude any other product to which, within reasonable

[6] The county is the relevant geographic market because seniors may enroll only in Medicare Advantage plans offered in the county where they live. PX0551 (Nevo Report) ¶ 88; Tr. 393:25–394:10 (Cocozza)

variations in price, only a limited number of buyers will turn." Times-Picayune Publ'g Co. v. United States, 345 U.S. 594, 612 n.31 (1953). That general rule applies even to "functionally interchangeable" products, meaning those that can be used for the same purpose as the product at issue. See, e.g., H&R Block, 833 F. Supp. 2d at 54–60 (excluding assisted tax preparation and do-it-yourself tax preparation from the market for digital do-it-yourself tax preparation software, even though all provide ways to complete a tax return); Staples, 970 F. Supp. at 1074–81 (excluding consumable office supplies sold outside office supply superstores from the market, even though those supplies were functionally interchangeable with office supplies sold inside the superstores).

This analytical approach guides antitrust courts in attempting to answer one "key question": whether particular products "are sufficiently close substitutes" such that substitution to one could "constrain any anticompetitive . . . pricing" in the other. See H&R Block, 833 F. Supp. 2d at 54. Products that meet that threshold generally belong in the product market. Once those products are grouped together, the "'market can be seen as the array of producers of substitute products that could control price if united in a hypothetical cartel or as a hypothetical monopoly.'" FTC v. Whole Foods Market, Inc., 548 F.3d 1028, 1052 (D.C. Cir. 2008) (Kavanaugh, J., dissenting) (quoting 2B Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 530a, at 226 (3d ed. 2007)). That vision of the proper product market is incorporated into the "hypothetical monopolist test" as set out in the Horizontal Merger Guidelines and applied by the courts in a number of cases. See Fed. Trade Comm'n & U.S. Dep't of Justice Horizontal Merger Guidelines § 4.1.1 (2010)[7]; see also Sysco, 113 F. Supp. 3d at 33–34; H&R Block, 833 F. Supp. 2d at 51–52.

To determine whether a group of products could be an antitrust market, the hypothetical monopolist test asks whether a hypothetical monopolist of all the products within a proposed

[7] Although the Guidelines are not binding, the D.C. Circuit and other courts have looked to them for guidance in previous merger cases. See, e.g., Heinz, 246 F.3d at 716 n. 9; Sysco, 113 F. Supp. 3d at 38.

market would likely impose a "small but significant and non-transitory increase in price" (SSNIP)—typically of five or ten percent—on at least one product in the market, including one sold by the merging firms. See Guidelines §§ 4.1.1, 4.1.2. Whether the hypothetical monopolist can profitably impose the price increase depends, in part, on the amount of substitution outside the proposed market. "If enough consumers are able to substitute away from the hypothetical monopolist's product to another product and thereby make a price increase unprofitable, then the relevant market cannot include only the monopolist's product and must also include the substitute goods." Sysco, 113 F. Supp. 3d at 33. But if substitution outside the proposed market is relatively low, then the hypothetical monopolist would likely impose the price increase without sacrificing a large number of sales. In that case, the price increase might be profitable, and the hypothetical monopolist's products would constitute the proper antitrust market. See id. at 33; Whole Foods, 548 F.3d at 1052 (Kavanaugh, J., dissenting).

The central market definition question in this case is about the nature and extent of any competition between Original Medicare options and Medicare Advantage. Phrased in terms of the hypothetical monopolist test, the question is whether a hypothetical monopolist of all the Medicare Advantage plans in a particular county could profitably impose a small but significant non-transitory increase in price on those plans—or whether substitution by seniors to Original Medicare options would make any attempted price increase unprofitable.

In answering that question, the Court has a number of analytical tools at its disposal. The first is provided by the Supreme Court's decision in Brown Shoe. There, the Court explained that the boundaries of a product market "may be determined by examining such practical indicia as industry or public recognition of the [relevant market] as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices,

sensitivity to price changes, and specialized vendors." Brown Shoe, 370 U.S. at 325. These "practical indicia" can be useful "evidentiary proxies for direct proof of substitutability." Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 792 F.2d 210, 218 (D.C. Cir. 1986); see also H&R Block, 833 F. Supp. 2d at 51. This makes intuitive sense: if two products have distinct characteristics, uses, customers, and prices, it is unlikely that a large number of customers would switch to one in response to a price increase in the other.

When applying the Brown Shoe factors here, the Court pays "close attention to the defendants' ordinary course of business documents." H&R Block, 833 F. Supp. 2d at 52. All market definition "must take into account the realities of competition." Whole Foods, 548 F.3d at 1039 (Brown, J.). Ordinary course of business documents reveal the contours of competition from the perspective of the parties, who have been quite successful in the sale of individual Medicare Advantage plans and may be presumed to "'have accurate perceptions of economic realities.'" Whole Foods, 548 F.3d at 1045 (Tatel, J.) (quoting Rothery Storage, 792 F.2d at 218 n.4).

Finally, in addition to the practical indicia and the ordinary course of business documents, the Court will rely on testimony from experts in the field of economics. See Sysco, 113 F. Supp. 3d at 27. As is customary in merger cases, the parties have introduced a wealth of economic evidence through their economists, Dr. Aviv Nevo and Jonathan Orszag. Together, Nevo and Orszag have provided testimony on subjects relevant to market definition, including the extent of substitution between Original Medicare and Medicare Advantage, the proper methods for applying the hypothetical monopolist test, and the relationship between market concentration and prices in Medicare Advantage. All of this evidence will be evaluated in turn.

1. Competition Between Original Medicare and Medicare Advantage

The Court will begin where seniors do: with the choice between Original Medicare and Medicare Advantage. By statute, Congress has provided that seniors can obtain Medicare benefits either "through the original medicare fee-for-service program," or "through enrollment in a [Medicare Advantage] plan." 42 U.S.C. § 1395w-21(a)(1).[8] Because Medicare Advantage plans are required to provide coverage for Medicare Parts A and B, the government agrees that "Medicare Advantage and Original Medicare are both ways for seniors to get their Medicare benefits." Tr. 15:13–15 (opening statement). It is up to the individual senior to choose—and that same basic choice is presented no matter where seniors look. Every year, CMS sends a handbook called "Medicare & You" to each Medicare beneficiary. Tr. 1225:20–22 (Cavanaugh). The 2017 version explains that there "are [two] main choices" for how seniors get Medicare coverage, then proposes a number of steps to help seniors select between them. See DX0130-017. Step one provides a binary choice between Original Medicare and Medicare Advantage. DX0130-017. The handbook also refers seniors to an online tool called the "Medicare Plan Finder," which can be used to "sort plans by type" and "compare the coverage, benefits, and estimated costs" associated with each. DX0130-016. Plan Finder can be used to search for Medicare Advantage plans and compare them to Original Medicare. Tr. 412:13–15 (Cocozza).

Some seniors turn to independent brokers or to corporate sales agents for advice about their healthcare options. Here, too, they are presented with the choice between Original Medicare options and Medicare Advantage. See, e.g., Tr. 1089:5–1090:1 (Fitzgerald) (independent broker); Tr. 2036:7–2040:5 (Kauffmann) (Humana sales manager); see also Brown Shoe, 370 U.S. at 325 (products sold by the same "vendors" may be in the same product market). Ultimately, a majority

[8] Defendants contend this provision amounts to a Congressional determination, binding on this Court, "that Original Medicare is an appropriate and adequate substitute for Medicare Advantage for every Medicare-eligible consumer." Defs.' Proposed Findings & Conclusions at 103. While the Court does not take this statutory language lightly, it does not consider the language determinative of the antitrust issues in this case.

of seniors choose Original Medicare (either with or without supplements). According to the government's economist, in 2016 only 44% of those seniors who were ineligible for eligibility-restricted Medicare options decided to enroll in Medicare Advantage.[9] PX0551 (Nevo Report) ¶ 38 & Exs. 1, 2. The rest selected an Original Medicare option.

Original Medicare also serves as a starting point for Medicare Advantage plan design. Alan Wheatley, Humana's Retail Segment President with responsibility for Medicare Advantage, explained the general plan design process. When entering a new county with a Medicare Advantage plan, Humana knows that CMS is "going to pay [to the company] Original Medicare's cost," in the form of the county-level benchmark. Tr. 561:10–13 (Wheatley). For Humana to beat that benchmark and introduce a viable plan, it must find a way to "improve health and lower costs." Tr. 561:20–21 (Wheatley). Those savings can then be used "to add some additional benefits to make [the Humana plan] attractive relative to the big competitors in that market." Tr. 561:23–25 (Wheatley). If the resulting plan has a better value than Original Medicare, Humana is willing to offer it in the market. Tr. 562:11–16 (Wheatley). In internal documents, Aetna and Humana reference the imperative to maintain a Medicare Advantage value proposition that is superior to the one offered by Original Medicare. See DX0479-002 ("[O]ur value proposition must stay competitive with Original Medicare."); DX0484-002 (citing an "[a]spiration" to "[a]gressively grow membership by delivering superior value proposition vs. [Original Medicare]"); DX0514-021 (listing the drivers of Medicare Advantage "Value Beyond Traditional Medicare").

Together, these dynamics create a degree of competition between Medicare Advantage and Original Medicare. Because both offer Medicare Parts A and B, the two programs are, at least to

[9] Some seniors, like those with certain disabilities or chronic conditions, may be eligible for eligibility-restricted Medicare options. Because they do not face the same choice between Original Medicare and Medicare Advantage as the average senior, they have largely been excluded from the analysis in this case. When these seniors are included in the analysis, the share of seniors in Original Medicare options grows larger.

some extent, functionally interchangeable. Every senior is given an option between the two and, historically, a majority of seniors have selected Original Medicare. Some degree of competition is also inherent in the CMS bid process. To be viable products, Medicare Advantage plans must control their costs—relative to Original Medicare—enough to offer beneficiaries more benefits or lower out-of-pocket expenses than Original Medicare does. For all these reasons, then, any assessment of the competitive conditions facing Medicare Advantage plans must take the role of Original Medicare into account.

None of this, however, means that Original Medicare must be included in the relevant product market. Not every competitor—not even every competitor with a functionally interchangeable product—must be included in the product market. See, e.g., H&R Block, 833 F. Supp. 2d at 54 (excluding two methods of tax preparation from the product market even though it was "beyond debate" that "all methods of tax preparation are, to some degree, in competition"). What matters is the extent to which competition from Original Medicare options would constrain the exercise of market power in Medicare Advantage. In a memorandum cited by the companies, Dr. Frank, the former Assistant Secretary for Planning and Evaluation at HHS, wrote that "in principle" Original Medicare is "in a position to 'discipline' competition" in Medicare Advantage. DX0087-010. To see whether that occurs in practice, the Court looks first to Brown Shoe and defendants' ordinary course of business documents.

2. Brown Shoe Factors & Ordinary Course of Business Documents

Compared to basic Original Medicare, the average Medicare Advantage plan has some distinct "characteristics and uses." Brown Shoe, 370 U.S. at 325. Unlike Original Medicare, which allows seniors to receive care from almost any provider, Medicare Advantage plans typically are HMOs or PPOs that come with limited provider networks. In exchange for accepting

the network limitations, enrollees receive benefits that Original Medicare does not offer, such as a cap on out-of-pocket expenses and, usually, a prescription drug benefit. They might also receive vision, dental, hearing, or fitness benefits that would have to be purchased separately under Original Medicare. Some seniors may decide that Original Medicare and Medicare Advantage are not reasonable substitutes. Those who want a limit on out-of-pocket expenses, or place a high value on supplemental benefits, would be unlikely to select Original Medicare. Those who value network flexibility, on the other hand, might not select Medicare Advantage.

Seniors can narrow the divide between Original Medicare and Medicare Advantage by purchasing supplemental coverage. By purchasing a MedSupp plan, for instance, a senior can limit out-of-pocket expenses in exchange for a monthly premium. Seniors may also purchase stand-alone coverage for prescription drugs, or for another supplemental benefit often offered by Medicare Advantage plans. One might expect, therefore, that a purely marginal senior, trying to decide between Original Medicare and Medicare Advantage, would routinely compare particular Medicare Advantage plans to particular MedSupp plans within the context of a larger Medicare market. And if there were large numbers of such seniors, one might further expect Aetna's and Humana's businesses to be organized around efforts to cater to them.

But that is not what the record reveals. The weight of the evidence presented at trial indicates "industry [and] public recognition" of a distinct market for Medicare Advantage. See Brown Shoe, 370 U.S. at 325. Competition within that market, between Medicare Advantage plans, is far more intense than competition with the products outside of it, like MedSupp plans. This evidence tends to show that substitution between Medicare Advantage and Original Medicare options is not nearly as substantial as defendants now suggest.

Both Aetna and Humana report individual Medicare Advantage results separately in their annual financial reports. PX0303 at 13 (Humana reporting Medicare Advantage revenue); PX0503 at 16 (Aetna reporting Medicare Advantage membership). According to Alan Wheatley, this separate reporting facilitates analysis by investors, who often compare one Medicare Advantage company against another. Tr. 482:8–19 (Wheatley). As defendants argue, this method of reporting is not determinative: just because "automakers track car sales by model does not suggest each model belongs in a separate market." Defs.' Proposed Findings & Conclusions [ECF No. 274] at 122. But neither is it irrelevant, because in this case the separate reporting reflects deeper divisions. At Aetna, more than three thousand employees work on Medicare Advantage and Part D, while about four hundred different employees are "dedicated to the Med Supp business." Tr. 261:9–14, 256:20–1 (Cocozza). Aetna also hosts the two businesses on separate IT platforms. Tr. 255:10–14 (Cocozza). Similar distinctions can be seen at Humana, which maintains "separate business units" for Medicare Advantage and MedSupp. Tr. 475:19–476:13 (Wheatley). However, executives at both companies cautioned against over-interpreting the extent to which the Medicare Advantage and MedSupp businesses are segregated. Aetna's dedicated MedSupp employees do not "work in a vacuum" fully divorced from Medicare Advantage. Tr. 256:20–257:1 (Cocozza). And various internal Humana functions, such as its service operations, might support both businesses. Tr. 475:16–19 (Wheatley).

Fair enough. But in one important respect—pricing—defendants' Medicare Advantage and MedSupp businesses seem to run on very different tracks. According to the government's economist, if "there were significant movement of seniors between Medicare Advantage plans and [MedSupp] plans, then firms would consider the pricing of one plan when setting pricing for the other plan." PX0551 (Nevo Report) ¶ 128. There is little indication that Aetna and Humana do

so. Quite the opposite is true. Aetna maintains separate teams of actuaries for pricing its Medicare Advantage and MedSupp plans. Tr. 680:13–16 (Wooldridge) (MedSupp actuaries do not work on Medicare Advantage pricing); Tr. 1995:6–18 (Paprocki) (Medicare Advantage actuaries do not work with MedSupp actuaries). And when pricing particular MedSupp plans, Aetna does not assess the prices of Medicare Advantage plans in the locations where the MedSupp plan will be offered. Tr. 257:23–1 (Cocozza). This evidence is inconsistent with the claims of close competition between Medicare Advantage and Original Medicare with MedSupp.

On the other hand, evidence of intense competition within Medicare Advantage is abundant. When Aetna and Humana refer to their "competitors," they are almost always referring to other Medicare Advantage organizations—and usually to other members of the Big 5. See Staples, 970 F. Supp. at 1079 ("In document after document, the parties refer to, discuss, and make business decisions based upon the assumption that 'competition' refers to other office superstores only."). For example, in a March 2015 email, Cocozza compares Aetna's Medicare Advantage business to its "peers." PX0007. Humana, she says, is Aetna's "most formidable competitor," before addressing UnitedHealth, Cigna, and Anthem in turn. PX0007-847. There is no mention of Original Medicare or MedSupp, which is typical. See, e.g., DX0283-003 (listing Aetna's "top competitors" as Humana, UnitedHealth, Cigna, and Anthem); PX0063-446 (email to Humana CEO comparing the enrollment growth of UnitedHealth, Cigna, Aetna, Anthem, and WellCare).

To compare themselves to these competitors, defendants calculate market shares of a Medicare Advantage market—on the national, state, and county levels. See PX0036-429 (Aetna document calculating national "market share growth" of UnitedHealth, Humana, Aetna, Cigna, and Anthem); PX0583-210 (Humana document dividing national "individual [Medicare Advantage] enrollment market share" between Humana, UnitedHealth, Aetna, Cigna, Anthem,

and "Other"); PX0155-454 (Humana document dividing North Carolina Medicare Advantage market share between "Major Competitor[s]" Humana, BlueCross BlueShield of North Carolina, UnitedHealth, Aetna, Cigna, and "Other"); PX0022-603 (Humana document collecting county-level membership data of Humana, Aetna, UnitedHealth, BlueCross BlueShield of Kansas City, and "Others" in the Kansas City area).[10]

Aetna and Humana prepare exceptionally detailed assessments of the competition between various Medicare Advantage plans. These documents were ubiquitous at trial. For example, a 2015 email to Aetna general managers solicited specific information about the cost-sharing and benefit structures of the plans being offered by their "true competition." PX0057-717. A proposed template included columns for UnitedHealth, Humana, Cigna, and "Etc." PX0057-718–19. Two Humana documents reflect a similar exercise. In one—a July 2015 "Competitor Analysis" of Aetna and Cigna—Humana conducted "Market Comparisons" in 17 local markets across the country. PX0012-355. Within each local market, it calculated Medicare Advantage market shares, then compared the various Humana, Aetna, and Cigna plans by type, monthly premium, limit on out-of-pocket costs, primary care physician and specialist copays, and prescription drug plans. See, e.g., PX0012-357 (San Antonio/Corpus Christi Market Analysis). A second 2015 Humana document contains a similar market-by-market, plan-by-plan analysis addressing 24 markets where Humana "deteriorated" and UnitedHealth or Aetna "will likely grow" and another 15 markets where Humana "held stable" but UnitedHealth or Aetna "were aggressive." PX0023-628–29. Within each market, Humana compared its competitors' individual plans on a variety of metrics, including whether the plan had increased its premium. See, e.g., PX0023-632. Such documents reflect clearly the scope and intensity of the competition within Medicare Advantage—

[10] The place for "Other[s]" in these documents refers to other Medicare Advantage providers, not to Original Medicare or MedSupp.

and, more specifically, between members of the Big 5. None of these documents focus on competition with Original Medicare.

Defendants have identified a limited number of documents that do refer to competition between Medicare Advantage and Original Medicare with MedSupp. Some refer to competition only in a very general manner. A 2015 Humana presentation, for instance, observes that "[o]ur main competitor is the traditional Medicare program. Beat them and we win big!" DX0501-003. An Aetna strategic planning document noted as a "Key Market Trend" the "[g]rowing role of Medicare Supplement" as an alternative to Medicare Advantage. DX0290-114. But a few documents give off a glimmer of more concrete, localized competition between Medicare Advantage and MedSupp.[11] A draft Medicare Advantage strategy within Humana proposes that the firm "increasingly migrate existing members" from MedSupp to Medicare Advantage. DX0484-002. An Aetna document about Washington state observes that increasing MedSupp premiums might offer a "wedge opportunity" for one of Aetna's Medicare Advantage plans. DX0313-091. Another market-specific Humana document about Southern Ohio graphs "Market Membership by Product" and includes both Medicare Advantage products and MedSupp. DX0510-005. But see PX0155-454 (Humana document dividing "MAPD" market shares "By Product Type" but not including MedSupp). Perhaps the most concrete evidence regarding competition between Medicare Advantage and MedSupp relates to the "Med Supp killer," a Medicare Advantage plan designed by Aetna to compete directly for MedSupp customers.

[11] Many of defendants' documents concerning Medicare Advantage reference a "penetration rate," which reflects the share of Medicare-eligible seniors who select Medicare Advantage over Original Medicare in a particular location. Usually, however, these references do not herald concrete competitive steps to be taken vis-à-vis some specific MedSupp plan or other Original Medicare option. As a result, in the Court's view, penetration rates are more appropriately interpreted as a statistic used to assess the size of the Medicare Advantage market.

DX0035-002; Tr. 2094:9–2095:5 (Follmer). Because the plan has been unsuccessful, Aetna now incentivizes brokers not to sell it. See Tr. 2096:18–2098:1 (Follmer).

But these documents are too few and too general to carry much weight. It is evident from the clear majority of the documents reviewed here that Aetna and Humana spend an enormous amount of time, money, and manpower assessing the offerings of competing Medicare Advantage plans. They make those assessments on a market-by-market, plan-by-plan basis, focusing on details concerning premiums, out-of-pocket costs, networks, and benefits. The passing references in the record to competition with Original Medicare or with MedSupp do not suffice to undercut the strong inference that must be drawn from the ordinary course of business documents—that Aetna and Humana focus most of their competitive efforts within the market for Medicare Advantage rather than on products outside of it, like MedSupp.

That focus makes sense, the government contends, if Medicare Advantage plans generally attract a set of "distinct customers." See Brown Shoe, 370 U.S. at 325. The government has indeed introduced a good deal of evidence showing that at least some seniors have a "durable preference" for Medicare Advantage relative to Original Medicare options. See Pls.' Proposed Findings & Conclusions at 38. The most persuasive of this evidence is switching data—that is, data about how often seniors leave Medicare Advantage plans and where they go when they do. The switching data presents a clear picture: Medicare Advantage enrollees rarely switch plans, but when they do, they overwhelming stay within Medicare Advantage.

The switching data evidence comes from a variety of sources. Using data from 2013 and 2014, the Kaiser Family Foundation concluded that 78% of Medicare Advantage enrollees remained with their plan during that period. Tr. 113:16–114:1 (Frank). In that same period, 11% of Medicare Advantage enrollees voluntarily left their plan in favor of a different Medicare

Advantage plan; only 2% of enrollees voluntarily left Medicare Advantage for an Original Medicare option. Tr. 114:1–8 (Frank). Of the voluntary switchers from Medicare Advantage, therefore, more than 80% switched to a different Medicare Advantage plan. According to Frank, this proportion has remained relatively stable, between 80 and 85%, in recent years. Tr. 115:9–16 (Frank); see also PX0554 (Frank Reply Report) Ex. 5 (presenting data for 2007 to 2014).

The pattern holds for seniors who voluntarily left their Medicare Advantage plan in response to a premium increase. Again using 2013 and 2014 data, the Kaiser Family Foundation concluded that 25 to 33% of Medicare Advantage enrollees left their existing plan in response to a premium increase of $20 per month—but no more than 13% of them switched to an Original Medicare option. PX0554 (Frank Reply Report) ¶ 32. A 2014 study commissioned by Humana reached similar results.[12] Out of a sample of 250 seniors who disenrolled from a Humana Medicare Advantage plan, 85% switched to a different Medicare Advantage plan. PX0015-879. Because many seniors cited costs, including high premiums, co-pays, or deductibles, as a reason for switching, the survey concluded that "[c]osts play a huge rule in [Medicare Advantage] members defecting." PX0015-853. Both Cocozza and Wheatley acknowledged that most seniors who leave an Aetna or Humana Medicare Advantage plan switch to a different Medicare Advantage plan, not to Original Medicare. Tr. 288:13–16 (Cocozza); Tr. 524:16–21 (Wheatley).

Switching within Medicare Advantage also dominates among seniors who must involuntarily switch from their Medicare Advantage plans, perhaps because their existing plan was cancelled. These seniors "overwhelmingly" return to Medicare Advantage. Tr. 116:2–6 (Frank); see also PX0554 (Frank Reply Report) ¶ 31 (citing a paper finding that between 83 and 95% of seniors whose Medicare Advantage plans were terminated switched to another Medicare

[12] The government offered expert testimony by Dr. Gary Ford, who was retained to assess the reliability of this Humana study. According to Ford, the study is reliable. Tr. 912:22–913:1 (Ford).

Advantage plan). After Humana discontinued one of its Medicare Advantage plans in the San Antonio area, Raul Gonzalez, a local broker, helped about 200 clients obtain new coverage. Only about 12 to 14 switched to Original Medicare plus MedSupp. Tr. 1034:24–1035:8 (Gonzalez). "For the most part," the others switched to an Aetna Medicare Advantage plan. Tr. 1033:1–1035:10 (Gonzalez); see also Tr. 1077:17–1080:14 (Fitzgerald). If seniors do not select a new plan when their existing plan is cancelled, they are defaulted back to Original Medicare. One 2015 paper cited by Frank finds that 89% of the seniors involuntarily moved to Original Medicare by default later chose to return to Medicare Advantage. PX0554 (Frank Reply Report) ¶ 32.

Nevo analyzed switching data from several sources and arrived at similar conclusions. First, he analyzed 2015 CMS data from the annual open-enrollment period, when any senior can switch between any Medicare options, including between Medicare Advantage and Original Medicare. Second, he analyzed a subset of that data, which focused only on those seniors who had their plan cancelled in 2015. And finally, he analyzed three years' worth of data from Aetna and Humana—unlike the CMS open-enrollment data, this data includes information concerning the annual "disenrollment period," when seniors can switch from Medicare Advantage to Original Medicare but not between Medicare Advantage plans. All else equal, including seniors who switched from Medicare Advantage during the disenrollment period might be expected to increase the overall share switching into Original Medicare options. But in all three instances, more than 85% of seniors who left one Medicare Advantage plan switched to another instead of to an Original Medicare option. See Tr. 1587:20–1592:18 (Nevo); see also PX0552 (Nevo Reply Report) Ex. 7.

The switching data makes clear that there is a group of seniors with a distinct preference for Medicare Advantage relative to Original Medicare. Testimony by the government's broker witnesses generally supports the same conclusion. See, e.g., Tr. 1071:11–17 (Fitzgerald) (after

receiving an overview of Original Medicare and Medicare Advantage, seniors begin "asking more questions about one side or the other"). A preference for Medicare Advantage may be based on a number of factors, including a senior's comfort with managed care plans or desire to receive all of his or her benefits from one source. See Pls.' Proposed Findings & Conclusions at 37 (collecting support for those propositions). But one important factor is cost. See Tr. 1023:24–1024:8 (Gonzalez) (questions about cost can "quickly determine" whether a senior chooses Medicare Advantage or MedSupp). The weight of the evidence suggests that, on average, Medicare Advantage plans have much lower out-of-pocket costs than Original Medicare plus MedSupp and prescription drug plans. See Brown Shoe, 370 U.S. at 325 (noting that "distinct prices" may be considered in assessing the boundaries of a market).

All Medicare Advantage plans come with a statutory limit on annual out-of-pocket expenses and most include coverage for prescription drugs. To recreate those benefits on the Original Medicare side, a senior would have to purchase MedSupp and prescription drug plans from a private insurer—and would likely end up paying significantly more in monthly premiums. The average Medicare Advantage enrollee pays $142 in monthly premiums, while the average senior enrolled in Original Medicare plus MedSupp and a prescription drug plan pays double that amount. PX0554 (Frank Reply Report) ¶ 26 & Ex. 4. But as the companies are correct to observe, monthly premiums are only part of the story. A senior with MedSupp coverage will likely not incur monthly out-of-pocket expenses in addition to his or her monthly premium. A senior in Medicare Advantage, on the other hand, may still have to pay various cost-sharing requirements in exchange for receiving medical care. His or her monthly out-of-pocket expenses, then, will depend on the amount of care received, in addition to the monthly premium. Even so, Medicare Advantage enrollees are still likely to enjoy lower out-of-pocket costs. Using national 2010 data,

a paper cited by Frank concluded that out-of-pocket costs for Original Medicare exceed those for Medicare Advantage by between $130 and $167 per month. PX0553 (Frank Report) ¶ 42; see also PX0554 (Frank Reply Report) ¶ 27.

The government does not have to prove that preferences for Medicare Advantage overlap with any demographic indicators. But here, there is evidence suggesting that Medicare Advantage plans tend to attract seniors with lower incomes. That trend has been observed by academics; by defendants' executives, competitors, and Molina; and by independent brokers. See Tr. 112:14–18 (Frank) ("[T]here's been quite a bit of research on this, and that research generally shows that people with lower incomes, lower levels of education, tend to join Medicare Advantage plans disproportionately to the rest of the population"); Tr. 1341:9–16 (Bertolini) (agreeing that the senior who chooses Medicare Advantage "tends on the average to be somewhat lower income than the population as a whole" because of Medicare Advantage's "total out-of-pocket costs"); PX0011-895 (Anthem executive noting that Medicare Advantage "attracts the lower/lower-middle income beneficiaries that can't afford Med Supp"); Tr. 2345:5–7 (Dr. Molina) (Molina CEO asserting that "the majority of people" in "Medicare Advantage are actually of lower income"); Tr. 1024:20–1025:1 (Gonzalez) (broker explaining that "it's much more difficult" for lower income people "to go with the Medicare Supplement and pay the higher costs"). But see DX0034-006; Tr. 715:3–7 (Wooldridge) (60% of Aetna's MedSupp customers make less than $35,000 a year). That lower-income seniors tend to select Medicare Advantage is circumstantial evidence that its out-of-pocket costs tend to be lower than comparable Original Medicare options.

Based on the Brown Shoe factors and the parties' ordinary course of business documents, the government has made a strong evidentiary showing in support of the Medicare Advantage product market. The switching data shows that there are some seniors with durable preferences

for Medicare Advantage. These seniors would be less likely than average to switch to a (often more costly) Original Medicare option in the event of a small but significant non-transitory increase in Medicare Advantage prices, and perhaps much less likely if they are low-income. Given the average cost differential between Medicare Advantage and comparable Original Medicare options, there may be room for a hypothetical monopolist of all Medicare Advantage plans in a particular county to profitably impose such a price increase without driving large numbers of seniors to Original Medicare. That will depend in part on the number of seniors who sit on the margin between Medicare Advantage and Original Medicare. But the parties' ordinary course of business documents, viewed through the lens of Brown Shoe, suggest that there are not as many of these seniors as one might imagine. Evidence abounds of intense, local competition between Medicare Advantage plans. Evidence of similar competition between Medicare Advantage plans and MedSupp is much scarcer. Collectively, the evidence tends to establish the existence of a market for the sale of individual Medicare Advantage plans.

3. Defendants' Counter Arguments

Aetna and Humana raise several counter arguments. They argue that the government has oversimplified the health-insurance market and the choices that seniors make. Medicare Advantage plans, they point out, can vary on a number of metrics, including the breadth of provider networks, benefits provided, total out-of-pocket costs; some plans, they continue, actually have higher estimated out-of-pocket costs or fewer benefits than a competing Original Medicare option. See Defs.' Proposed Findings & Conclusions at 18–19. As a result of this overlap, defendants believe that "a Medicare Advantage plan's closest cousins are often one or more Original Medicare options instead of other Medicare Advantage plans. Excluding all Original Medicare options in

order to create an MA-only market would ignore the ample overlap between the two types of plans." Id. at 115–16 (internal citation omitted).

What's more, defendants contend, the government has mischaracterized the manner in which seniors make healthcare choices. Each chooses among the available Medicare Advantage and Original Medicare options based on highly individualized preferences that are based on factors such as cost, medical condition, comfort with limited provider networks, and convenience. Preferences may change over time, and are not predetermined by demographic factors like income. See id. at 22–28. Defendants conclude "it is [too] difficult to generalize about the kinds or types of beneficiaries who will select one product over the other." Id. at 123.

Taking the second contention first, the Court agrees that seniors make individualized healthcare decisions. That does not mean, however, that all generalization is futile. Indeed Aetna and Humana, who have a vested financial interest in accurately assessing the competitive landscape, have not always so scrupulously avoided generalizing about seniors' healthcare decisions. For example, a draft presentation prepared for a Humana board retreat includes a slide addressing "Why Consumers Select Products," which differentiates between Medicare Advantage and MedSupp customers. Because Original Medicare plus MedSupp is "the most expensive plan combo," seniors who select it are "[w]illing to pay more for a flexible network of physicians and comprehensive coverage." DX0514-023. Medicare Advantage, on the other hand, attracts those seniors who want "additional health coverage, but [are] willing to sacrifice having a flexible network to keep costs low." DX0514-023; see also PX0045-196 (Humana sales director opining that low Medicare Advantage penetration levels likely means that "there are higher income eligibles in the area who are more inclined to have [MedSupp] policies versus MA plans"); PX0025-920 (2016 Aetna presentation describing the "Typical Med Supp Customer" based on

income and geography); PX0021-017 (Aetna executive explaining that Medicare Advantage and Med Supp are "apples and oranges," that "the nature of MA and Med Supp focuses on different areas," and that "an area cannot be both a good Med Supp and a good MA area.").

Aetna and Humana have also historically been willing to generalize about the costs and benefits of Medicare Advantage compared to Original Medicare options. Internal documents claim that Medicare Advantage provides "[b]etter benefits [and] lower cost" than Original Medicare, either with or without supplemental coverage. See DX0480-006; see also DX0514-021 (Humana document noting that Medicare Advantage offers "[m]ore benefits & less out of pocket payments than Original Medicare"). Humana makes similar claims. In its 2016 Presentation on Medicare Advantage and Prescription Drug Plans, Humana notes that Medicare Advantage plans generally "have lower out-of-pocket costs" than Original Medicare and may come with "[e]xtra benefits." DX0111-023; see also Tr. 2061:6–16 (Kauffman) (Humana sales manager confirming that she shares this information during meetings with seniors).

Nor is the Court convinced that an Original Medicare option is the "closest cousin" for many Medicare Advantage plans. If that is indeed the case, it is not reflected in the record. CMS's Medicare & You Handbook advises seniors to make a threshold choice between Medicare Advantage and Original Medicare, not to choose from a continuum of intermingled Medicare Advantage and Original Medicare options. PX0519-017. A "Decision Tree" created by Humana presents a senior's decision in a similar fashion. Before assessing a plan's network, costs, or supplemental benefits, the senior is asked to decide whether she is willing to "accept network restrictions"; if so, she is deemed a good fit for Medicare Advantage, but if not, she is deemed a good fit for MedSupp. DX0490-045. If Medicare Advantage plans were routinely competing with a "closest cousin" from the Original Medicare side of the family, one would expect to find evidence

of that competition in the ordinary course of business documents. But for the most part, it is not there. Aetna and Humana frequently compare their Medicare Advantage offerings to other Medicare Advantage plans, but they rarely, if ever, compare them to particular MedSupp plans. Seniors, it seems, do not make that comparison either. In eight years selling Medicare products, broker Robert Fitzgerald has never compared a particular Medicare Advantage plan to a particular MedSupp plan—at a senior's request or otherwise. Tr. 1073:18–1074:1 (Fitzgerald).

Aetna and Humana contend that any differences that do exist between Medicare Advantage and Original Medicare have been and will be narrowed by various legislative and regulatory changes. They cite two of note. First, the Affordable Care Act linked Medicare Advantage reimbursement rates to Original Medicare provider costs, resulting in a substantial reduction in county-level benchmarks phased in over a period of six years. See Tr. 1127:13–1128:20 (Cavanaugh). These reductions, defendants contend, have reduced "the reimbursements MAOs receive from CMS, decreasing their revenues, and increasing competition between Original Medicare and Medicare Advantage plans." Defs.' Proposed Findings & Conclusions at 20.

The companies also believe that Accountable Care Organizations, or ACOs, will bring Original Medicare and Medicare Advantage closer. ACOs, which were created by the Affordable Care Act, are groups of providers who join together in an attempt to coordinate care, control costs, and improve health outcomes; those that succeed in holding down costs may be paid a financial bonus by CMS. PX0554 (Frank Reply Report) ¶ 42. By responding to these incentives and providing value-based care within Original Medicare, defendants argue, ACOs will help convert Original Medicare from a fee-for-service model into one more like Medicare Advantage. In fact, defendants say, this conversion is already underway. See Tr. 1174:16–1175:2 (Cavanaugh) (discussing efforts to move Original Medicare away from fee-for-service payment model).

But these policy changes have little impact on the market definition analysis in this case. The Court does not doubt that the benchmark reductions made the basic Medicare Advantage value proposition of lower costs and additional benefits somewhat more difficult to deliver. See DX0508-033 (slide deck for Humana Board of Directors Meeting observing that "Benchmark Reductions are reducing MA Value Add" and that "MA Value Add drives Penetration Rate"). But because these reductions will be fully phased in by the end of 2017, see Tr. 1128:21–24 (Cavanaugh), their impact has largely already been felt. Moreover, MAOs have largely succeeded in maintaining the Medicare Advantage value proposition by controlling costs, bidding below the benchmarks, and offering supplemental benefits not provided by Original Medicare. See PX0551 (Nevo Report) ¶ 67; Tr. 1130:3–12 (Cavanaugh). Thus, the differences between Medicare Advantage and Original Medicare options have been preserved.

The argument concerning ACOs is also unpersuasive. The market definition analysis "focuses solely on demand substitution factors," Heinz, 246 F.3d at 718 (internal quotation marks omitted)—i.e., "customers' ability and willingness to substitute away from one product to another in response to a price increase" or "reduction in product quality or service," Guidelines § 4. It is not clear what impact the advent of ACOs would have on the extent of this substitution. As an initial matter, it is the provider, not the senior, who decides whether to participate in an ACO; seniors are often "passively attributed" to them, sometimes even without their knowledge. PX0554 (Frank Reply Report) ¶ 46. Hence, there is no choice by the senior customer to use an ACO. And for the most part, ACOs do not diminish the essential differences between Medicare Advantage and Original Medicare. Perhaps a senior who has been attributed to an ACO would receive some of the care coordination ordinarily associated with Medicare Advantage. But unlike Medicare Advantage enrollees, Original Medicare enrollees assigned to ACOs are not penalized for seeking

care outside the network. Tr. 133:22–134:5 (Frank). Nor would they receive additional coverage or cost reductions for participating in the ACO. PX0554 (Frank Reply Report) ¶ 44. Ultimately, then, ACOs have almost "nothing to do with a comparison of the benefits of traditional Medicare or Medicare Advantage." Tr. 1132:3–6 (Cavanaugh). And as a result, they also have little to do with defining the product market in this case.

The companies' third argument, though, fares better. Aetna and Humana argue that an exclusive focus on the behavior of switch-outs—those seniors who have already enrolled in a Medicare Advantage plan—is "misguided." Every day, approximately 10,000 seniors "age in" and become eligible for Medicare, and are thus presented with the choice between Original Medicare options and Medicare Advantage.[13] Aetna and Humana argue that Medicare Advantage organizations must compete for these age-ins, in addition to seniors already enrolled in Medicare Advantage or Original Medicare options.

The companies argue that the parties' recent Medicare Advantage enrollment data makes this clear. In 2015 only 45% of Aetna's and Humana's Medicare enrollees switched from a different MAO; the remaining 55% enrolled either as they aged into Medicare (21%) or switched from an Original Medicare option (34%). Tr. 3044:7–20 (Orszag). Focusing just on the behavior of seniors who have already selected a Medicare Advantage plan is like standing outside a Ford dealership and asking those who emerge with Ford keys "What do you think about Fords?" Tr. 3646:15–18 (closing argument). That survey would reveal that some drivers have a preference for Fords, but it would also obscure the broader competitive picture. Here, defendants insist, the broader competitive picture shows that a hypothetical monopolist of all Medicare Advantage plans

[13] Seniors who are still employed when they turn 65 may not have to make an individualized choice between Medicare Advantage and Original Medicare. Instead, they may be offered a group plan by their employer, which falls on one side of the line or the other. See Tr. 116:18–24 (Frank) (describing employer-provided MedSupp plans that wrap around Original Medicare); Tr. 1119:14 – 20 (Cavanaugh) (describing group Medicare Advantage plans).

could not impose a price increase. If it tried, some Medicare Advantage enrollees may remain within the market; but the age-ins would turn to Original Medicare options in sufficient numbers to make the price increase untenable. See Tr. 48:21–49:13 (opening statement).

In the Court's view, Aetna and Humana understate the importance of the switching data, which indicates not only that some seniors opt for Medicare Advantage, but that those seniors stick with it in the face of price increases or plan exits. Their argument implies that age-ins are as a group somehow closer to the margin between Medicare Advantage and Original Medicare options than seniors who have already made an initial selection. But there is little evidentiary support for that contention. Despite the unrelenting torrent of age-ins, Aetna and Humana focus their competitive efforts primarily within the Medicare Advantage market. Still, the companies' basic point is well-taken: the market definition analysis in this case must rest on a complete assessment of the demand for individual Medicare Advantage. For that assessment, the Court now turns to the economists.

4. Econometric Evidence

The government's economist, Dr. Aviv Nevo, analyzed whether the proposed market for the sale of individual Medicare Advantage plans would satisfy the hypothetical monopolist test. As set out in the Horizontal Merger Guidelines, that test asks whether

> a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products ("hypothetical monopolist") likely would impose at least a small but significant and non-transitory increase in price ("SSNIP") on at least one product in the market, including at least one product sold by one of the merging firms.

Guidelines § 4.1.1. If so, the candidate market may be the relevant product market. See Sysco, 113 F. Supp. 3d at 33–34; H&R Block, 833 F. Supp. 2d at 51–52. Because Medicare Advantage

passed under all formulations of his hypothetical monopolist tests, Nevo concluded that individual Medicare Advantage plans constitute a relevant product market. Tr. 1610:16–21 (Nevo).

Nevo's analysis began with his demand model, which provides several key inputs for his hypothetical monopolist test. Nevo used 2011 to 2016 CMS data on Medicare Advantage plan enrollment, premiums, and characteristics. PX0551 (Nevo Report) ¶¶ 152–53. The CMS data thus reflects the choices made by millions of seniors—including age-ins, those who chose Original Medicare options, and those who chose Medicare Advantage. Tr. 1603:6–21, 1604:9–15 (Nevo). Like other economists who have studied demand for Medicare Advantage products, Nevo used a "nested logit model." See PX0551 (Nevo Report) ¶ 150. Nested logit models are appropriate "where some consumers may prefer a group, or 'nest,' of choices to the other choices" available to them. PX0551 (Nevo Report) ¶ 148. Applied here, the nested logit model can be used to test whether, and to what degree, a senior might prefer "a Medicare Advantage plan because it is a Medicare Advantage plan." PX0051 (Nevo Report) ¶¶ 147, 148.

The model incorporates a "nesting parameter" that reflects the presence and strength of any such preference. PX0551 (Nevo Report) ¶¶ 148, 149. The nesting parameter can vary from zero to one, although any positive nesting parameter indicates that some seniors "have a distinct preference for [Medicare Advantage] plans as a group." Tr. 1602:4–9 (Nevo). Nevo's nested logit model yielded a nesting parameter of .65, indicating that many seniors do have a distinct preference for Medicare Advantage compared to other coverage options. Tr. 1602:4–9, 1602:25–1603:5 (Nevo). Nevo's work is in line with the academic literature, which has consistently estimated positive nesting parameters when studying demand for Medicare Advantage. See PX0551 (Nevo Report) ¶ 150 & Ex. 9 (reporting that earlier studies' "preferred nesting parameter estimate[s]" ranged between 0.32 and 0.84, "with all but one being greater than 0.50").

The size of the nesting parameter has implications when examining measures of consumer substitution. The nesting parameter can be used to calculate an "aggregate diversion ratio" for a particular product, which applied here, "represents the share of seniors who would respond to a price increase on their current Medicare Advantage plan by choosing another Medicare Advantage plan." PX0551 (Nevo Report) ¶ 164. The higher the nesting parameter, the higher the aggregate diversion ratio; and the higher the aggregate diversion ratio, "the more closely Medicare Advantage plans compete with each other rather than with other coverage options." PX0551 (Nevo Report) ¶ 165. Using his nesting parameter of .65, Nevo calculated an aggregate diversion ratio of 70%—that is, 70% of seniors leaving a Medicare Advantage plan in response to a price increase would switch to a different Medicare Advantage plan. Tr. 1605:1–3 (Nevo). As a check on his analysis, Nevo compared his aggregate diversion ratio to the switching data summarized above. Because that data generally shows that more than 80% of seniors leaving one Medicare Advantage plan switch to another, Nevo believes that his estimated aggregate diversion ratio is actually conservative. Tr. 1604:16–16:05:12 (Nevo); PX0552 (Nevo Reply Report) ¶ 57 & Ex. 7.

Armed with his demand estimates, Nevo turned to the hypothetical monopolist test. In deciding whether to impose a price increase, the hypothetical monopolist is trying to balance two effects. On the one hand, the price increase will likely drive away some consumers, thereby costing the monopolist a number of sales and the associated profit; but on the other hand, the monopolist will make higher profits on sales it retains, so that whether the price increase would be profitable depends on the relative sizes of those effects. Tr. 1608:24– 1609:6 (Nevo). To simulate those effects, an economist needs measures relating to the number of customers who would leave the hypothetical monopolist's product in response to the price increase (elasticities), the number who would remain within the market rather than leave it (the aggregate diversion ratio), and the

profit associated with each sale (margins). See PX0551 (Nevo Report) ¶ 177; see also Tr. 1611:15–21 (Nevo). Nevo's elasticities were derived from his nested logit model. His margins were computed using those elasticities and what Nevo has described as a "standard model of competition." See PX0551 (Nevo Report) ¶ 177; Tr. 1611:22–1612:1 (Nevo).

Nevo ran two versions of the hypothetical monopolist test. The first asked whether a hypothetical monopolist of all the Medicare Advantage plans in a particular county could increase profits by imposing a SSNIP on at least one Aetna or Humana plan. Tr. 1611:2–4 (Nevo); see also Guidelines § 4.1.3 (describing this inquiry as a "[c]ritical loss analysis"). Using his demand estimates, Nevo concluded that the hypothetical monopolist could impose a SSNIP of five or ten percent on at least one Aetna or Humana Medicare Advantage plan in all 364 complaint counties. Tr. 1612:6–15 (Nevo); see also PX0551 (Nevo Report) ¶ 178 & Ex. 12. Nevo's second version of the hypothetical monopolist test was based on a "merger simulation." Tr. 1615:9–15 (Nevo). There, instead of raising prices only on one plan, the hypothetical monopolist is permitted to simultaneously raise prices on all of the Medicare Advantage plans being offered in a particular county. The test then asks whether the monopolist, empowered to set a profit-maximizing price for every Medicare Advantage plan, would increase the price of at least one plan by a SSNIP. Tr. 1614:21–1615:8 (Nevo); see also PX0551 (Nevo Report) ¶ 181. Again, using his demand estimates, Nevo concluded that the candidate market passed the hypothetical monopolist test. In all 364 complaint counties, the hypothetical monopolist would impose a SSNIP on at least one Aetna or Humana plan. Tr. 1618:5–8 (Nevo); see also PX0551 (Nevo Report) ¶ 187 & Ex. 14. Under his tests, Nevo concluded that individual Medicare Advantage plans constitute a relevant product market.[14] Tr. 1619:8–9 (Nevo).

[14] Before embarking on his economic analysis, Nevo reviewed much of the relevant evidence in this case, including the parties' ordinary course of business documents and the switching data. It is not necessary to summarize

Aetna and Humana, relying largely on their economist, Jonathan Orszag, attempt to undermine Nevo's analysis in various ways. They first lodge technical criticisms of Nevo's econometric methods. Like Nevo, Orszag used a nested logit model to assess demand for Medicare Advantage products. And like Nevo's, Orszag's model predicted positive nesting parameters. But his nesting parameters were lower than Nevo's, ranging from .23 to .35. Tr. 3145:16–19 (Orszag); DX0419 (Orszag Report) ¶ 94. The comparatively lower nesting parameters, in turn, translate into comparatively lower aggregate diversion ratios. Whereas Nevo found that, in response to a price increase in Medicare Advantage, the aggregate diversion to other Medicare Advantage plans would be 70%, Orszag estimates it at only 49%. Tr. 3142:2–6 (Orszag). He attributes these differences primarily to differences between the models' instrumental variables, an econometric tool used to disentangle correlation from causation. Tr. 3157:8–11 (Orszag). Digging into the models yet further, Orszag offered a number of reasons why, in his view, Nevo's method for constructing instrumental variables lacked "a good intuition" and thus distorted his results. Tr. 3165:13–14 (Orszag); see generally Tr. 3157:8–3167:11 (Orszag).

Orszag also opines that certain of the inputs and assumptions undergirding Nevo's analysis are inconsistent with how the market operates in practice. In particular, Orszag criticizes Nevo for basing his calculations on an average economic margin of 24%, even though medical-loss regulations require MAOs to spend 85% of the revenue associated with a particular contract on medical care (thus leaving a maximum of 15% for administrative costs and profit).[15] Tr. 3177:5–

Nevo's conclusions regarding that evidence. It will suffice to note that Nevo believes that evidence also points to the existence of a market for individual Medicare Advantage plans. See Tr. 1618:13–1619:9 (Nevo).

[15] The parties agree that "margin" is a somewhat fraught concept, which can vary depending on the context. As explained by several witnesses, there are important differences between economic margins, underwriting margins, and profit margins, so one must be careful about drawing quick comparisons between "margin" figures. Aware of that danger here, Orszag has not simply compared Nevo's "economic margin" estimates to the "margin" cap in the medical loss regulations and decided that Nevo's margins are too high. Instead, he has constructed an argument that the medical loss regulations imply a cap on economic margins of 15%. See Tr. 3186:2–16 (Orszag).

17 (Orszag). Orszag further faults Nevo for assuming in his merger simulation that the hypothetical monopolist would set prices at the county-level, despite the fact that Medicare Advantage organizations typically set a plan-level price that applies in all the various counties where the plan is offered. See Tr. 3168:11–3169:20 (Orszag); see also Tr. 1723:9–16 (Nevo) (acknowledging that Medicare Advantage organizations "offer plans at a service area level").

When these flaws are assessed together, Orszag contends, the whole of Nevo's economic analysis is fatally undermined: both versions of his hypothetical monopolist test—critical loss analysis and merger simulation—rely on erroneously high diversion ratios and margins which, once incorporated, bias his results toward the adoption of a Medicare Advantage only market. The version using the merger simulation is doubly flawed, Orszag believes, because it also incorporates unrealistic assumptions about the manner in which MAOs set plan prices. Tr. 3186:17–3187:13 (Orszag). Aetna and Humana therefore assert that Nevo's conclusions regarding market definition are faulty and they urge the Court to disregard them.

In his rebuttal testimony, Nevo has offered defenses of his instrumental variables, his margin figures, and the assumptions in his merger simulation. Fortunately, however, the Court does not need to referee to resolution this econometric battle of the experts. By performing much of his analysis using Orszag's estimates, in addition to his own, Nevo has largely insulated his work from defendants' critiques.[16] Specifically, Nevo performed his first hypothetical monopolist test, the critical loss analysis, using estimates derived from eight different specifications of Orszag's demand model. Tr. 3503:3–9 (Nevo); see also PX0552 (Nevo Reply Report) ¶ 38. These estimates included Orszag's elasticities, the margins implied from those elasticities, and diversion

[16] Nevo also performed his critical loss analysis using estimates derived from the academic paper that found the lowest nesting parameter. The Medicare Advantage product market also passed these iterations of the hypothetical monopolist test. See PX0551 (Nevo Report) ¶ 180 & n.251.

ratios derived from Orszag's nesting parameters. See Tr. 3598:19–3599:3 (Nevo); see also PX0552 (Nevo Reply Report) Note to Ex. 2. No matter which set of estimates Nevo used, and no matter whether he imposed a SSNIP of 5% or 10%, the candidate market—Medicare Advantage—passed the hypothetical monopolist test for the majority—and usually for the overwhelming majority—of the complaint counties. See PX0552 (Nevo Reply Report) ¶ 39 & Ex. 2. That was true even for those iterations of the test where Nevo used economic margin figures below the 15% ceiling that Orszag believes is implied by regulation. Tr. 3509:11–24 (Nevo).

Nevo likewise performed his second hypothetical monopolist test, which relies on his merger simulation, using estimates derived from the eight specifications of Orszag's model. Once again, the Medicare Advantage only market passed the hypothetical monopolist test in the overwhelming majority of the complaint counties. Tr. 3503:16–20 (Nevo); PX0552 (Nevo Reply Report) ¶¶ 40–41 & Ex. 3. Thus, it seems that Nevo's analysis is largely unaffected by defendants' technical critiques. The companies have not really attempted to argue otherwise, either in their proposed findings and conclusions or during their closing arguments. See Defs.' Proposed Findings & Conclusions at 120–21; Tr. 3762:8–3763:7 (post-trial argument). As a result, the Court is comfortable moving past these criticisms and focusing instead on defendants' other arguments.[17]

Again relying on Orszag, Aetna and Humana next argue that Nevo has misapplied the Horizontal Merger Guidelines when performing his hypothetical monopolist test. The crux of Orszag's argument is that, in response to a price increase on a particular Medicare Advantage plan, there are likely to be Original Medicare options that enjoy greater diversion than the plan's most

[17] It is true that, when Nevo uses Orszag's estimates, a small number of complaint counties do not pass the hypothetical monopolist test with a Medicare Advantage market. If these iterations of Nevo's tests were the only market definition evidence in the record, the Court might conclude that the government had not proven a valid market with respect to those counties. But these iterations of the test are not the only evidence in the record. The ordinary course of business documents and Brown Shoe factors point strongly to the existence of a Medicare Advantage market. So do Nevo's preferred iterations of the hypothetical monopolist test, which are all the more persuasive given that their results are generally unchanged by the use of Orszag's estimates.

distant Medicare Advantage substitute. Applying what he calls the "circle principle," which he derives from "Example 6" of the Guidelines, Orszag argues that any such Original Medicare options must be included in the product market. By ignoring the circle principle, defendants assert, Nevo has defined an overly narrow and conceptually flawed product market.

To assess this argument, the Court turns first to the language of the Guidelines:

> Groups of products may satisfy the hypothetical monopolist test without including the full range of substitutes from which customers choose. The hypothetical monopolist test may [therefore] identify a group of products as a relevant market even if customers would substitute significantly to products outside that group in response to a price increase.

Guidelines § 4.1.1. In Example 5, the Guidelines provide an illustration of that principle. There, they posit a candidate market containing two products, A and B. In response to a price increase on either, two-thirds of the lost sales are diverted to products outside the market. Nonetheless, based on the margin assumptions included in the example, "economic analysis shows that a hypothetical profit-maximizing monopolist controlling Products A and B would raise both of their prices by ten percent." Id. Under these circumstances, the Guidelines conclude, a market of Products A and B satisfies the hypothetical monopolist test, even though "customers would substitute significantly to products outside that group in response to a price increase." Id.

Broadly speaking, Example 5 is helpful for the government, since it means that a Medicare Advantage only market may satisfy the hypothetical monopolist test despite fairly significant diversion to Original Medicare options. But the Guidelines continue with language on which defendants rely:

> When applying the hypothetical monopolist test to define a market around a product offered by one of the merging firms, if the market includes a second product, the Agencies will normally also include a third product if that third product is a closer substitute for the first product than is the second product. The third product is a closer

> substitute if, in response to a SSNIP on the first product, greater revenues are diverted to the third product than to the second product.

Id. This "circle principle" is then illustrated in Example 6:

> Example 6: In Example 5, suppose that half of the unit sales lost by Product A when it raises its price are diverted to Product C, which [like Products A and B] also has a price of $100, while one-third are diverted to Product B. Product C is a closer substitute for Product A than is Product B. Thus Product C will normally be included in the relevant market, even though Products A and B together satisfy the hypothetical monopolist test.

Defendants have made two attempts to identify an Original Medicare "Product C" that must intrude into the proposed Medicare Advantage only market. Both are grounded upon an analysis of diversion ratios. First, Orszag treated Aetna's or Humana's Medicare Advantage products as Product A and all Original Medicare options—that is, all the possible combinations of Original Medicare plus the various MedSupp and prescription drug plans—as Product C. Using the estimates from his own demand model, and applying the "circle principle," he concluded that all Original Medicare options must be included in the market. See Tr. 3068:11–3069:10 (Orszag). If all Aetna Medicare Advantage plans are Product A, there is 23% diversion to Humana plans, 49% diversion to all Medicare Advantage plans (including Humana's), and 51% diversion to Original Medicare options. DX0418 (Orszag Reply Report) ¶ 53 & Table II-4. And if all Humana Medicare Advantage plans are Product A, there is 16% diversion to Aetna plans, 44% diversion to all Medicare Advantage plans (including Aetna's), and 56% diversion to Original Medicare options. DX0418 (Orszag Reply Report) ¶ 53 & Table II-4. Original Medicare options, then, must be included in the market—even if one uses all other Medicare Advantage products as the operative Product B. Tr. 3068:11–18, 3069:7–10 (Orszag).

The Court finds this application of the "circle principle" unpersuasive. In effect, Orszag has taken all the sales escaping the government's proposed market, relabeled them as "Product C,"

and then asserted that, under that new moniker, they must be included in the product market. But as Example 5 makes clear, a market may satisfy the hypothetical monopolist test, and thus be considered as a proper antitrust product market, "even if customers would substitute significantly to products outside that group in response to a price increase." Guidelines § 4.1.1. Endorsing Orszag's first application of Example 6 would create an exception that completely swallows that rule.[18] In Example 5, two-thirds of diversion escapes the market. Here, even using Orszag's lower diversion ratios, only slightly more than half does. That diversion fits squarely within Example 5, and Orszag's first purported application of the "circle principle" will be rejected.

So too will Orszag's second proposed application, although for different reasons. Rather than treating all Original Medicare options collectively as one Product C, Orszag's second application posits that each possible combination of Original Medicare, MedSupp, and Part D plans might constitute its own product. Neither Orszag nor Nevo calculated diversion ratios between every Medicare Advantage plan and every conceivable individual Original Medicare option.[19] Tr. 3070:7–13 (Orszag); Tr. 3567:5–20 (Nevo). But Orszag thinks it likely that some individual Original Medicare "Product Cs" are closer substitutes for some Medicare Advantage plans than their most distant Medicare Advantage competitors. His reasoning is as follows. Enrollment data reveals that there is basically no diversion between some sets of Medicare Advantage plans. The data also reveals that diversion from Aetna or Humana Medicare Advantage plans to Original Medicare as a whole is substantial—slightly more than 50% using Orszag's estimates. He reasons that "by definition," then, there must be some Original Medicare "products" that enjoy more diversion from Aetna and Humana Medicare Advantage plans than their most

[18] It would also require (somewhat counter-intuitively) grouping together as one product all the possible combinations of Original Medicare, MedSupp, and Part D plans.

[19] There is some indication in the record that, given the compressed schedule in this case (adopted largely at the companies' request), CMS could not timely provide the data necessary to perform those calculations.

distant Medicare Advantage substitutes. Pursuant to the circle principle, Orszag concludes, any such products must be included in the market. Tr. 3070:25–3072:24 (Orszag).

The problem with this more nuanced argument, however, is that it is almost entirely speculative. Orszag has not identified an Original Medicare product of the kind that he describes above, although Nevo has not proved that one does not exist. Defendants imply, but stop short of explicitly arguing, that this gap in the factual record should fall on the government as the party with the ultimate burden. When asked at closing arguments whether, in order to prove its candidate market was a valid product market, the government needed to "calculate a diversion ratio for every product that has a potential to be in the market," counsel for defendants was somewhat non-committal. See Tr. 3764:1–11 (post-trial argument). Regardless, defendants plainly believe that the lack of a complete set of diversion ratios undermines the government's ability to carry its burden on market definition.

The Court disagrees. If taken to its logical conclusion, defendants' position implies a purely econometric approach to market definition, requiring the government to calculate individual diversion ratios for all the products potentially in the market, rank them from highest to lowest, and, at some point, draw a line between those products that fall within the market and those products that fall outside. But that technical approach is not taken by the cases. Econometric evidence can be powerful evidence, but it is not the only evidence that courts consider in defining the relevant market. Indeed, the cases relied upon by both parties here have considered the Brown Shoe factors and ordinary course of business documents, in addition to econometric evidence, before reaching conclusions about the proper market definition. In this case, the government has marshalled a wide array of qualitative evidence. Most of it points to the existence of a Medicare Advantage only market. And none of it suggests frequent, close competition between Medicare

Advantage plans and particular Original Medicare "Product Cs." That evidence cannot now be disregarded, simply because the government has not undertaken a particular bit of economic analysis. The qualitative evidence in this case is still persuasive—and largely supports the conclusion that the relevant product market is Medicare Advantage plans alone.

Nor does the possible existence of a specific Original Medicare "Product C" require the Court to disregard the government's econometric evidence. The Guidelines make clear that the hypothetical monopolist test does not aim to identify a "single relevant market." See Guidelines § 4.1.1. Rather, the test "ensures that markets are not defined too narrowly" and, in so doing, identifies a market that will "illuminate the evaluation of competitive effects." Id. Within these parameters, the government "may evaluate a merger in any relevant market satisfying the [hypothetical monopolist] test," and will "usually do so in the smallest" market that qualifies. Id.; see also Sysco, 113 F. Supp. 3d at 26 (adopting this "narrowest market" principle) (citing Arch Coal, 329 F. Supp. 2d at 120); see also H&R Block, 833 F. Supp. 2d at 59 (same).

The government has operated within those parameters here. Based on the qualitative evidence, it has (properly, in the Court's view) identified individual Medicare Advantage plans as a candidate product market in which to evaluate the merger's competitive effects. Through multiple applications of the hypothetical monopolist test, the government's expert determined that a hypothetical monopolist in that market could impose a SSNIP on at least one plan sold by Aetna or Humana. Admittedly, those tests would be even more persuasive if they conclusively foreclosed the existence of an Original Medicare "Product C." But that does not mean that they are of no persuasive value. Like the rest of the government's evidence, the hypothetical monopolist tests tend to establish the existence of a market for the sale of individual Medicare Advantage plans alone. The Court will not disregard that evidence, and risk broadening the market in violation of

the narrowest market principle, simply because one of the Guidelines' examples says that a hypothetical Product C, if it exists at all, should "normally" be included. That is especially true here, where there is no showing whatsoever that such a Product C exists. Even if there are a limited number of as yet unidentified Product Cs that might be included in the market, moreover, defendants have not explained why that should suffice to bring in all Original Medicare options.

Defendants' final economic argument is based on quantitative analysis by Orszag, rather than on a critique of Nevo. Orszag's economic analysis focused on the relationship between competition and prices in Medicare Advantage. To study that relationship, he used a regression that employed various measures of concentration and plan price. See DX0419 (Orszag Report) ¶ 108. Orszag's regression identified no statistically significant relationship between the two.[20] DX0419 (Orszag Report) ¶ 108 & Table II-6. He believes that this analysis answers the same question as the various hypothetical monopolist tests run by Nevo. When real-world MAOs face decreases in competition, defendants contend, they do not increase prices. Therefore, Nevo's abstract models notwithstanding, the government's proposed market "does not pass the hypothetical monopolist test when you use a real-world test." Tr. 3062:20–23 (Orszag).

But defendants cannot so easily lay claim to the "real world." To assess the relationship between Medicare Advantage competition and prices, Orszag himself used a model—and that model is not impervious to econometric critique. One persuasive criticism has been levied by Nevo.[21] Using what he calls "plan fixed effects," Orszag's model focuses exclusively on the changes to the prices of particular plans over time. Tr. 3191:3–8 (Orszag). The problem with that

[20] Orszag also finds no correlation between concentration and MAO margins. Although the companies refer to this conclusion several times in multiple sections of their brief, they have not persuasively explained its relevance. In the Court's view, the important part of Orszag's analysis concerns the relationship between concentration and price.

[21] The government also argues that Orszag's regression is not a proper hypothetical monopolist test because it incorporates "supply side" factors like the effects of entry and the existence of regulation. Because the Court finds the government's econometric critique to be persuasive, it need not address this argument.

approach, according to Nevo, is that it misses an important competitive dynamic: Medicare Advantage organizations sometimes introduce new plans or segment existing ones in response to competition, rather than adjusting price. Tr. 3513:5–23 (Nevo). The government has cited a number of documents where defendants contemplate segmenting plans in order to "target one or more counties" for a "different premium/cost-share" than the other counties currently covered by the plan. See PX0379-689 (Aetna "Bid Segmentation Concept Brief"); PX0035-808 (Humana document recommending segmenting a plan "to increase premium where competition allows").

When Nevo removes the "plan fixed effects" in order to account for that dynamic, he finds a statistically significant relationship between Medicare Advantage premiums and concentration in a particular county; as concentration increases, so do average premiums. PX0552 (Nevo Reply Report) ¶ 68 & Ex. 9; see also Tr. 3512:13–3513:9 (Nevo) (explaining his adjustments to Orszag's model). In that respect, Nevo's adjusted regression is consistent with the academic literature, which has generally concluded that decreased competition decreases the extent to which Medicare Advantage organizations pass benchmark increases through to beneficiaries as lower costs or better benefits. Tr. 129:14–130:18 (Frank); see also PX0553 (Frank Report) ¶¶ 58–63 (citing studies); PX0552 (Nevo Reply Report) ¶ 64 (same). The companies have presented the Orszag regression as powerful evidence regarding the incentives of the hypothetical monopolist that fully rebut the results of Nevo's hypothetical monopolist tests. But in light of Nevo's critique and the academic literature, the Court concludes that Orszag's regression cannot bear that weight. On balance, then, the expert case too tilts clearly toward the government.

5. Summary

Considering the evidence collectively, the Court concludes that the government has established the existence of a product market including the sale of individual Medicare Advantage

plans but excluding Original Medicare options. Original Medicare and Medicare Advantage are functionally interchangeable as ways for a senior to receive basic health benefits. And, in some sense, Medicare Advantage plans compete with Original Medicare. As a prerequisite to offering a plan, an MAO must sufficiently differentiate it from Original Medicare.

But most MAOs do that successfully, and create products different from Original Medicare in a number of important respects: they have a limited network, cap out-of-pocket spending, coordinate care, and generally offer supplemental benefits like prescription drug coverage. These differences limit the extent to which one is reasonably interchangeable with the other, although seniors can make Medicare Advantage and Original Medicare into closer substitutes by purchasing a MedSupp or prescription drug plan. In many cases, these options will be offered to the senior by the same vendor at the same time.

That does not necessarily mean, however, that they all belong in the same product market. The evidence tends to show the opposite. The Brown Shoe factors generally point toward the existence of a Medicare Advantage market. And the ordinary course of business documents make plain that, rather than focusing their efforts on competition with Original Medicare, Aetna and Humana focus on competition with other Medicare Advantage organizations. To do so, they compile impressive amounts of local, plan-specific competitive intelligence about Medicare Advantage offerings in markets across the country. MedSupp plans rarely, if ever, figure into that assessment. Aetna's and Humana's focus on competition within Medicare Advantage, along with seniors' observed strong tendency to switch from one Medicare Advantage plan to another when faced with a plan cancellation or price increase, make it unlikely that competition from Original Medicare options will suffice to discipline Medicare Advantage pricing.

The econometric analysis supports the same conclusion. Although the Court does not (and does not need to) adopt his analysis in every detail, Professor Nevo has performed a battery of tests that all point to the same conclusion: the sale of individual Medicare Advantage plans satisfies the hypothetical monopolist test and thus is a relevant product market. That result generally holds up whether Nevo uses a critical loss analysis or a merger simulation, and whether he uses his own estimates, Orzsag's, or those from the academic literature.

Ultimately, Aetna's and Humana's litigation position implies that competition between Medicare Advantage organizations is not needed to discipline Medicare Advantage plan prices or quality. Even in the 70 counties where the merged firm would be the only Medicare Advantage organization post-merger, the companies believe there is no competition problem. But the evidence in this case suggests otherwise. Based on careful consideration of all that evidence, the Court concludes that the proper markets for evaluating the merger are those for individual Medicare Advantage plans in the 364 complaint counties.

B. Competitive Effects

To establish its prima facie case, the government next attempts to show that the merger would "lead to undue concentration in the market" for individual Medicare Advantage plans in all 364 complaint counties. See Baker Hughes, 908 F.2d at 982. Market concentration, which "is a function of the number of firms in a market and their respective market shares," is often measured using the Herfindahl–Hirschmann Index, or HHI. See Arch Coal, 329 F. Supp. 2d at 123–24. The HHI "is calculated by summing the squares of the individual firms' market shares, and thus gives proportionately greater weight to the larger market shares." Guidelines § 5.3. "Sufficiently large HHI figures establish the [government's] prima facie case that a merger is anti-competitive." Heinz, 246 F.3d at 716. Under the Guidelines, a market is "highly concentrated" if it has an HHI

over 2,500. Guidelines § 5.3. If a merger would produce a highly concentrated market and "involve an increase in the HHI of more than 200 points," then it "will be presumed to be likely to enhance market power." Id. Courts have adopted these thresholds in determining whether a merger is presumptively unlawful. See Heinz, 246 F.3d at 716 (applying a prior version of the Guidelines); FTC v. Staples, Inc., Civ. Action No. 15-2115 (EGS), 2016 WL 2899222, at *18 (D.D.C. May 17, 2016) (Staples II) (applying the current version of the Guidelines); Sysco, 113 F. Supp. 3d at 52–53 (same).

There is no suspense about the outcome of this HHI analysis here: the Aetna-Humana merger easily surpasses the Guidelines' concentration thresholds in all 364 of the complaint counties. PX0551 (Nevo Report) ¶ 196; Tr. 1622:17–20 (Nevo). Indeed, in more than 75% of the counties, the post-merger HHI would be greater than 5,000, and in more than 70% of the counties, the merger would cause an HHI increase of more than 1,000 points. PX0551 (Nevo Report) ¶ 196. And in 70 counties where Aetna and Humana are the only MAOs currently in the market, the post-merger HHI would reflect a merger to monopoly. PX0551 (Nevo Report) ¶ 195; Tr. 1622:21–1623:2 (Nevo). Based on these compelling concentration figures, the government has established its prima facie case. Defendants do not attempt to argue otherwise. Tr. 3774:21–3775:4 (closing argument). Thus, the government is entitled to a presumption that the merger would substantially lessen competition in the sale of individual Medicare Advantage plans in all 364 complaint counties.

The government, however, has not rested on that presumption. Instead, it has introduced evidence tending to show that the merger would substantially lessen competition. "Mergers that eliminate head-to-head competition between close competitors often result in a lessening of competition." Staples II, 2016 WL 2899222, at *20; see also Sysco, 113 F. Supp. 3d at 61 (same)

(collecting cases); Guidelines § 6 ("The elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition."). That can be true even where the merging parties are not the only, or the two largest, competitors in the market. See Sysco, 113 F. Supp. 3d at 62 (citing Heinz, 246 F.3d at 717–19; H&R Block, 833 F. Supp. 2d at 83–84). Mergers between close competitors might have unilateral anticompetitive effects if "the acquiring firm will have the incentive to raise prices or reduce quality after the acquisition, independent of competitive responses from other firms." H&R Block, 833 F. Supp. 2d at 81. Anticompetitive effects are more likely still when "the merger would result in the elimination of a particularly aggressive competitor in a highly concentrated market." Staples, 970 F. Supp. at 1083.

Aetna is just such a "particularly aggressive" Medicare Advantage competitor. Following its acquisition of Coventry in 2013, Aetna became the fourth largest Medicare Advantage insurer in the country. DX0290-113. And in the intervening years it has continued to aggressively expand its Medicare Advantage footprint, targeting many new counties for expansion each year. Tr. 1330:2–19 (Bertolini). Between 2013 and 2016, Aetna expanded into 640 new counties—more than twice as many as the next most prolific entrant. PX0551 (Nevo Report) ¶ 218 & Ex. 18. When Aetna enters a new market, it generally does so with a focus on building a high value provider network and offering zero-premium plans. PX0036-427 (Aetna 2016 "Medicare Deep Dive Overview" noting a commitment to "[g]rowing [high value networks] to help sustain $0 premiums"); see also Tr. 346:6–347:3 (Cocozza). Aetna considers its zero-premium plans as "a cornerstone in most markets to drive growth." PX0046-324; see also Tr. 354:21–355:2 (Cocozza) (over 50% of Aetna enrollees are in zero-premium plans); Tr. 347:4–25 (Cocozza) (Aetna's zero-premium PPO, since being introduced in 2014, has contributed to market-share growth in a number of local markets). Even without the Humana merger, Aetna intends to continue expanding its

geographic footprint and maintain its focus on building value-based networks. PX0036-427 (Aetna 2016 "Medicare Deep Dive Overview" setting forward-looking targets).

Aetna's expansion has put it on a collision course with Humana. In 2011 Aetna and Humana competed in Medicare Advantage in just 79 counties, but by 2016, they competed in 675. PX0551 (Nevo Report) ¶¶ 219–20 & Ex. 19; Tr. 1582:13–15 (Nevo) (Aetna and Humana collectively boast more than 59% of the 1.7 million Medicare Advantage enrollees in the complaint counties). That growing overlap is not merely geographical. It is also philosophical. At trial, Bertolini and Broussard discussed their shared outlook on the future of healthcare. See Tr. 1837:1–15 (Broussard) ("[Mark and I] almost finished each other's sentences.") Like Aetna, Humana has employed a strategy to "build networks around value-based arrangements." Tr. 327:14–15 (Cocozza); see also Tr. 2106:13–18 (Follmer) (acknowledging that, in Georgia, Humana has "value-based contracts with providers that are more advanced than other Medicare Advantage plans"). In a 2015 email, Cocozza touches on both these areas of overlap when assessing the nature of the competition between Aetna and Humana: "[Humana] was #1 in growth and is our most formidable competitor. We compete with them everywhere and they have momentum. They continue to lead in terms of aggressive pursuit of strategic provider relationships and are willing to deploy capital in many forms to secure preferred standing and exclusivity." PX0007-847.

The parties disagree about whether significant head-to-head competition is reflected in the econometric data. According to defendants, the data reveals that the head-to-head competition between Aetna and Humana is not special. For support, they rely on two regressions performed by Orszag. The first, already discussed above, purports to find no general relationship between competition and plan price in Medicare Advantage. Tr. 3087:10–24 (Orszag); DX0419 (Orszag Report) ¶¶ 117–18 & Table II-6. The second, which focuses specifically on head-to-head

competition between Aetna and Humana, concludes that the presence of one defendant in a county has no statistically significant impact on the prices charged by the other. Tr. 3090:1–20 (Orszag); DX0419 (Orszag Report) ¶¶ 121–24 & Tables II-7 & II-8.

By focusing solely on changes in the price of a particular plan, however, both these regressions are susceptible to the same critique: namely, that they will fail to discern changes to competition that result from the introduction of new plans or the segmentation of old ones. PX0552 (Nevo Reply Report) ¶ 75. In the Court's view, that limits the persuasive value of Orszag's regressions. Moreover, when Nevo performs a similar regression focused instead on changes in market share, he finds evidence of substantial head-to-head competition between Aetna and Humana. Specifically, Nevo concludes that Aetna's presence in a particular county depresses Humana's market share by 9.4 percentage points—more than twice the effect associated with other insurers. PX0552 (Nevo Reply Report) ¶¶ 76–77 & Ex. 11; Tr. 3520–3521:3 (Nevo). Switching data also reveals close (and increasing) head-to-head competition between Aetna and Humana. In 2014, Aetna Medicare Advantage products ranked as the ninth most popular option among seniors switching from Humana; in 2016, they ranked second. PX0551 (Nevo Report) ¶ 222. Thus, even if Orszag's analysis was air-tight, Nevo's (largely uncontroverted) analysis suggests that there is substantial competition between Aetna and Humana.

Given Nevo's analysis, it is not surprising to find significant evidence of head-to-head competition between Aetna and Humana throughout the country. See, e.g., PX0023-628–29 (2015 Humana document comparing Aetna, United, and Humana plans in 15 markets where "Humana held stable" and United or Aetna was "aggressive"); PX0027-229 (Aetna document calling Humana "our primary MA competitor"); PX0397-647 ("Humana will be [Aetna's] most serious threat [in Georgia] in the near future."); PX0455-601 ("Today, Humana (~50k mbrs.) and Aetna

(~34k mbrs) dominate the Kansas City Market."); PX0050-116 (Humana email referring to "[o]ur #1 NC Competitor Aetna"). They compete on multiple dimensions of Medicare Advantage plan design, including network and cost. For example, in anticipation of the upcoming 2015 annual enrollment period, Aetna compared its provider network to Humana's in Alabama and recommended "some network fortification." PX0394-862; see also PX0013-344. If one company fails to keep pace, the competitive consequences can be significant. In Georgia, for instance, Humana and United had the misfortune of raising premiums on their PPO plans in the same year as Aetna introduced its zero premium PPO. Tr. 2101:2–21 (Follmer). As a result, Aetna enjoyed a "bonanza." PX0393-185.

This head-to-head competition benefits seniors who shop for Medicare Advantage plans in the form of broader networks and lower costs. Two illustrations will suffice. The first relates to Aetna's 2014 introduction of its zero-premium PPO in Raleigh (Wake County), North Carolina. At that time, Humana was selling an LPPO, a regional PPO, and an HMO in Wake County. Unlike Aetna's PPO, Humana's PPOs had premiums of $53 and $81 respectively. Tr. 770:2–4, 773:10–16 (Farley). Humana's HMO had no premium, but that plan was built on a "coordinated care type of model," which provided "less access to various hospitals and doctors." Tr. 770:7–19 (Farley). Duke University Hospital was among those hospitals outside the Humana HMO's network in Wake County. Tr. 773:17–19 (Farley). Aetna's zero-premium PPO wedged between these various Humana offerings by combining a zero-premium price with a broader PPO network encompassing all the major hospital systems in Wake County, including Duke. See Tr. 773:20–23 (Farley). Upon learning of Aetna's plan, one impressed Humana marketing employee remarked "Wow. A $0 premium on a PPO plan." PX0024-129.

By late 2015, Aetna's PPO was "dominating in [W]ake County." PX0038-804. Humana's HMO, on the other hand, "[was] not selling." PX0038-804. Part of Aetna's success lay in its ability to exploit the Humana HMO's limited provider network. PX0295-285; Tr. 779:2–15 (Farley). An Aetna employee in Wake County even emailed all the brokers in the area to say that Humana would not be continuing its affiliation with Duke in the coming year, predicting that the change would "help you boost all of your sales with the Aetna Product." PX0050-119. Although the email was not accurate (Duke still accepted Humana's PPO products), it is indicative of the competition between the companies. In response to the pressure from Aetna, Humana began actively recruiting new providers in order to expand its HMO network. PX0352-884; Tr. 819:5–20 (Farley).

Another example comes from San Antonio, where Aetna and Humana offer competing HMO plans. For its 2016 bid, Aetna decided to improve the value proposition on its San Antonio HMO in order to "compete with United and Humana HMOs." PX0039-711. In the ensuing annual enrollment period, broker Raul Gonzalez moved a number of his clients out of Humana's HMO and into Aetna's. Tr. 1040:11–20 (Gonzalez). He said that, "[f]or a lot of people, it was an easy transition": while both plans had similar networks, the Aetna plan had a specialty co-pay that was $15 dollars lower. Tr. 1040:23–1042:2 (Gonzalez). For the following year, Humana dropped its specialty copay by $15 to match Aetna's. Tr. 1042:3–9 (Gonzalez).[22]

Together, this evidence suggests that there is significant head-to-head competition between Aetna and Humana, that it drives improvements to plan cost and quality, and that—if the merger were consummated—that competition would be lost, with some resulting deterioration in the

[22] Aetna and Humana note that they each compete with a number of other Medicare Advantage organizations in Raleigh and San Antonio, not only with one another. True enough. But that does not change the fact that these markets would be highly concentrated post-merger, nor does it directly rebut the government's evidence that direct competition between them has previously driven plan improvements.

Medicare Advantage products offered. To predict the likely competitive effects of the proposed merger in a more quantitative manner, the government relies on a second merger simulation by Nevo. This merger simulation assumes that all Aetna and Humana Medicare Advantage plans are owned by one firm, which will set prices on each "in order to maximize total profits across all their plans within each county." PX0551 (Nevo Report) ¶¶ 208–09. The merged firm's pricing behavior depends in part on seniors' demand for various Medicare Advantage plans and Original Medicare options (modeled using the elasticities and aggregate diversion ratios derived from Nevo's nested logit model). PX0551 (Nevo Report) ¶¶ 207–08. Pricing behavior also depends on inputs regarding plan cost and profit margin. PX0551 (Nevo Report) ¶ 208. When Nevo performs his merger simulation using his own estimates, he predicts substantial annual competitive harm as a result of the merger: premiums in the complaint counties would increase by 60%, seniors would pay $360 million more in rebate-adjusted premiums, and taxpayers would pay an additional $140 million in the form of higher payments from CMS to insurers. Tr. 1630:3–8, 1631:16–21 (Nevo). In sum, Nevo's preferred version of the merger simulation predicts $500 million per year in combined anticompetitive harm to seniors and taxpayers.[23] Tr. 1631:21–1632:1 (Nevo).

Aetna and Humana again object to Nevo's newest merger simulation. Relying on Orszag, the companies argue that Nevo's model has "debilitating flaws," because it assumes that Medicare Advantage plans are priced at the county level, uses margin figures not consistent with observed margins, and predicts premium increases that are unreasonably high. See Defs.' Proposed Findings & Conclusions at 51–52; see also id. at 120–21; Tr. 3175:5–11 (Orszag). Defending his merger simulation on rebuttal, Nevo sounded a somewhat humbler note about its probative value.

[23] When Nevo performs this merger simulation using estimates derived from Orszag's nested logit model, he likewise predicts premium increases. All eight merger simulations predict premium increases of at least 9%. PX0552 (Nevo Reply Report) ¶ 84 & Ex. 12; Tr. 1630:9–17 (Nevo).

The merger simulation, he explained, is not meant as an "exact prediction model for pricing" at a county-by-county level. Tr. 3517:22 (Nevo). Instead, it aims to assess whether, and to what extent, the merged firm would have an incentive to raise prices after the merger. Tr. 3517:24–25 (Nevo). When interpreting the results, therefore, the focus should not be on "the exact number[s]," but rather on the "direction" of the changes. Tr. 3518:18–20 (Nevo). And here, Nevo concludes, all iterations of the merger simulation point toward a price increase following the merger.

Although the merger simulation is "an imprecise tool," it "nonetheless has some probative value in predicting the likelihood of a potential price increase after the merger." H&R Block, 833 F. Supp. 2d at 88; see also Sysco, 113 F. Supp. 3d at 67. Based on a comprehensive assessment of demand, and in its various iterations that include utilizing Orszag's demand estimates, Nevo's merger simulation predicts that the merged firm would have the incentive and ability to increase quality-adjusted premiums in the complaint counties. The Court considers the merger simulation as econometric evidence in support of that limited proposition, in part because its results are consistent with the other evidence regarding the likely competitive effects of the proposed merger. As reflected by the HHI scores, the merger would create 364 (very) highly concentrated markets, including 70 county-level monopolies, and hence must be presumed to substantially lessen competition. The merger would also extinguish the competitive fire generated by Aetna's rapid expansion—through value-based networks and aggressively priced plans—into Humana's Medicare Advantage territory. The observed competition between these Big 5 insurers is intense, encompasses various dimensions of plan design, and has greatly benefitted seniors. Freed from that competition, the merged firm may have an incentive to raise premiums—or, perhaps, to relent from lowering them and improving plan quality. The results of Nevo's merger simulation, then, provide additional support for that inference.

Based on its market concentration figures, the government has established a prima facie case and is entitled to a presumption that the Aetna-Humana merger would substantially lessen competition in the market for individual Medicare Advantage plans in all 364 complaint counties. It is not a stretch to call the government's prima facie case based on the HHI analysis under the Guidelines an overwhelming one, given how high the concentration figures are. The government has also introduced additional evidence supporting that presumption that could be used to carry its ultimate burden of persuasion, if Aetna and Humana are successful in rebutting the presumption. The Court turns next to Aetna's and Humana's rebuttal arguments.

C. Government Regulation

Aetna's and Humana's first attempt to rebut the presumption of anti-competitive effects focuses on the role played by CMS, and the federal government more generally, in regulating competition in Medicare Advantage. The companies do not contend that this system of federal regulation confers implied immunity from the antitrust laws. See Tr. 3725:20–23 (post-trial argument). It is unlikely that they could succeed in doing so, because "[i]mplied antitrust immunity is not favored, and can be justified only by a convincing showing of clear repugnancy between the antitrust laws and the regulatory system." Nat'l Gerimedical Hosp. & Gerontology Ctr. v. Blue Cross of Kanas City, 452 U.S. 378, 388 (1981) (internal quotation marks omitted). There is no indication of such "repugnancy" here.

Nonetheless, the government's regulation of Medicare Advantage remains relevant. "Antitrust analysis must always be attuned to the particular structure and circumstances of the industry at issue." Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 411 (2004); see also Brown Shoe, 370 U.S. at 321–22. "Part of that attention to economic context is an awareness of the significance of regulation." Trinko, 540 U.S. at 411. "One factor

of particular importance is the existence of a regulatory structure designed to deter and remedy anticompetitive harm." Id. at 412. Where such a structure exists, the likelihood of anticompetitive harm may be "significantly diminish[ed]." Id. (internal quotation marks omitted) (quoting Concord v. Boston Edison Co., 915 F.2d 17, 25 (1st Cir. 1990) (Breyer, J.)).

Aetna and Humana assert that federal regulation of Medicare Advantage leaves "no opening for the anticompetitive effects that the Government posits." Defs.' Proposed Findings & Conclusions at 129. The Court disagrees. Based on the evidence presented, the Court concludes that CMS regulation was not "designed to deter and remedy anticompetitive harm." See Trinko, 540 U.S. at 412. And because it is unlikely to do so here, its existence does not suggest that the government's "prima facie case inaccurately predicts the [merger's] probable effect on future competition." Baker Hughes, 908 F.2d at 991.

Many of the CMS rules and regulations at issue here are applied through the annual bid process. In June, a Medicare Advantage organization must submit a separate "bid" to CMS for each plan that they wish to offer in the following year. Tr. 1178:11–17 (Cavanaugh); Tr. 1910:22–1911:2 (Paprocki). Putting together a bid is an arduous task. Each bid must include detailed estimates of the plan's revenue requirement, cost structure (including both medical and administrative costs), and margin projections, backed up by extensive data and calculations. Tr. 1910:1–6, 1935:24–1936:2, 1958:8–15 (Paprocki). Every bid must also be certified by an actuary. Tr. 1952:21–25 (Paprocki). Each year, CMS produces two lengthy documents—a "call letter," describing the terms of the Medicare Advantage program, and a set of instructions about bid submission—that together contain many of the applicable CMS rules and regulations. See DX0014 (call letter); DX0349 (bid instructions). Once the bids have been submitted, CMS, in collaboration with outside actuaries it retains, reviews the bids to ensure that they comply with all

these requirements. Tr. 1178:20–23 (Cavanaugh); Tr. 1959:1–2 (Paprocki). That process, sometimes called the "desk review," usually lasts from about mid-June until the end of July. Tr. 1959:14–17 (Paprocki). Non-compliant bids will not be approved. Tr. 2554:12–14 (Coleman).

When the desk review uncovers a problem with a bid, CMS will typically reach out to the MAO and explain its concerns. Tr. 1143:13–16 (Cavanaugh); Tr. 1991:22–1992:2 (Paprocki). Sometimes, the MAO has simply made a mistake, in which case it will correct the bid.[24] Tr. 1992:24–1993:1 (Paprocki). But on other occasions, CMS and the MAO might disagree about whether a bid is compliant and discussion then ensues. The government characterizes that discussion as a "negotiation" where the MAO pushes back and, if it makes any changes at all, will make them in "baby steps" until CMS relents. See Pls.' Proposed Findings & Conclusions at 90–91; see also Tr. 2006:6–2007:12 (Paprocki). Defendants, on the other hand, see an interaction where CMS can instruct the MAO to make any changes it deems necessary, because CMS has all the leverage. See Tr. 1991:16–1993:12 (Paprocki). Whatever the proper characterization, however, the outcome is the same: the MAO usually revises the bid until CMS determines it complies with all requirements. Tr. 453:12–16 (Cocozza); Tr. 2554:20–22 (Coleman).

Whether CMS regulation would be likely to ameliorate any competitive harm resulting from the merger depends on the particular regulatory tools at CMS's disposal. In contending that these tools would be sufficient, Aetna and Humana ask the Court to consider "a truly ill-intentioned MAO" intent on exercising "its [market] power to the greatest extent possible," but hemmed in on every side by CMS regulation. See Defs.' Proposed Findings & Conclusions at 129–31. Significant competitive harm, however, could be caused by a (much) less rapacious firm.

[24] Even after revising the bid, the MAO could still be the subject of a CMS compliance notice. Tr. 1942:8–17 (Paprocki).

Accordingly, the Court will focus more generally on the extent to which federal regulation would prevent the merged firm from increasing premiums or reducing benefits on particular plans.

Some of the regulatory tools identified by the companies do not really address that issue. The companies think it important that the government, "an undeniably sophisticated entity," can influence the amount that Medicare Advantage organizations are paid through its control over the benchmark. See id. at 107. But the Court does not see how CMS could use the benchmark, which CMS merely calculates based on a statutory formula, to resist a change to a particular plan. Tr. 1137:12–16 (Cavanaugh). Other regulatory tools are similarly unlikely to impose a constraint. There would be plenty of room for the merged firm to increase premiums without violating the statutory cap on beneficiary out-of-pocket costs, which is currently set at $6,700 per year. CMS's rules about minimum network adequacy, which Aetna and Humana typically exceed, would likewise do little to stave off a premium increase. See Tr. 291:8–16 (Cocozza); Tr. 547:8–20 (Wheatley). And the "meaningful difference rule," which generally prohibits MAOs from offering two plans with substantially similar out-of-pocket costs in the same county, takes no position on what those estimated out-of-pocket costs must be.[25] See DX0014-161.

Some regulatory tools are more closely related to premiums or plan quality, but still are not well-suited to preventing unwanted changes at the plan level. Limits on medical loss ratios fall into this category. By statute, MAOs must spend at least 85% of the revenue obtained under a contract (whether from CMS or from beneficiaries) on medical services, see 42 U.S.C. § 1395w-27(e)(4); Tr. 1147:2–6 (Cavanaugh), meaning that only 15% of that revenue may be retained as profit or to cover administrative costs. Revenue retained in excess of that amount must be returned to beneficiaries. And if an MAO remains out of compliance with the medical loss ratio for three

[25] The meaningful difference rule does not apply to two plans of different types (for example, an HMO and a PPO) or plans offered under different contracts. See Tr. 2009:22–2012:5 (Paprocki).

consecutive years, it may be barred from enrolling new members. Tr. 1148:6–13 (Cavanaugh). All else equal, then, an increase in plan premium or a decrease in benefits may have the effect of decreasing a plan's medical loss ratio—i.e., having it fall below 85%.

However, these provisions are a poor tool for regulating plan price or quality. First, the medical loss ratio requirements are applied at the contract rather than at the plan level. Tr. 2008:22–24 (Paprocki). Because contracts often cover multiple plans—indeed, sometimes as many as 30 or 40—a change to a single plan is likely to have only a highly attenuated impact on the medical loss ratio of the contract as a whole. See Tr. 2008:15–19 (Paprocki). Individual plans covered by larger contracts may thus have medical loss ratios less than 85%, thereby enabling greater profits—and, in fact, some of Aetna's plans do. Tr. 2009:6–8 (Paprocki). And it is unlikely that CMS could use the medical loss ratio regulations to request changes to a particular bid. Medical loss ratios are not applied as part of the bid process at all. Instead, they are calculated after-the-fact, based on actual revenue and costs. Tr. 1147:10–16 (Cavanaugh). It would be largely up to the merged firm, therefore, to forecast whether a premium increase or benefit reduction would cause a contract to exceed the medical loss ratio regulations.[26] Hence, the medical loss ratio regulations have serious shortcomings as a tool for regulating the design of particular plans. And hanging over all of this is an additional layer of uncertainty: because CMS is only now preparing to release the first year of medical loss data, the Court and the parties can only speculate about how the regulations might operate in practice. Tr. 1148:14–17 (Cavanaugh).

[26] The companies argue that they would strive to avoid creating plans with medical loss ratios less than 85%. To compensate for a plan below 85%, the merged company would need to have another plan in the same contract above 85%. That comparatively richer plan could in turn attract a high number of beneficiaries, ultimately costing the company money. See DX0014-162; Tr. 2017:15–2018:15 (Paprocki). That might be possible but, in the Court's view, is far too remote to show that the medical loss ratio regulations impose a meaningful constraint on the prices of particular plans.

The CMS margin rules have similar limitations. Most of the margin restrictions are "Aggregate-Level Requirements," meaning that they apply above—and sometimes far above—the bid level. DX0349-028. CMS regulations allow MAOs to decide whether to apply the aggregate-level margin requirements at the level of the contract, the legal entity, or the parent organization. DX0349-028; see also Tr. 2004:16–20 (Paprocki). Aetna chooses to apply them at the parent organization level, which incorporates "all of Aetna." Tr. 2004:16–2005:5 (Paprocki). Applied in that way, the aggregate margin rules require that Aetna's aggregate forecasted bid margins align with its actual margins from prior years and are within 1.5% of the margins on its overall business. See DX0349-029.

To be sure, it is likely that an increase in premiums or a reduction in benefits would increase the margin forecasted for a particular plan. But that particular plan is just a drop in the ocean. For the 2017 plan year, Aetna submitted 239 bids and Humana submitted over 400 more. Tr. 1994:11–13 (Paprocki); see Tr. 491:15–16 (Wheatley) (noting Humana has more than 400 Medicare Advantage plans). Increased premiums on one plan, or even on several plans, would thus be unlikely to have much of an effect on the merged firm's aggregated margin figures. Indeed, the evidence shows that a fairly low aggregate margin target can conceal wide variation (and much higher margins) at the regional or bid level. For example, even though Humana targets a margin of 4% at the parent organization level, it has submitted individual bids with margins as high as 20%. Wheatley Apr. 22, 2016 Dep. 138:11–23, admitted at Tr. 579:25–580:6 (Wheatley); see also Tr. 2196:16–22 (Fernandez) (some Humana plans earn margins as high as 12 and 15%); Tr. 2004:12–15 (Paprocki) (CMS has approved Aetna bids with margins of 13 and 14%). All of this makes it very unlikely that CMS could wield the aggregate margin rules in order to force a change to the design of a particular plan—even one projecting a relatively high margin.

The most precise regulatory tool at CMS's disposal is its rule concerning total beneficiary cost. By statute, CMS is empowered to reject a bid "if it proposes significant increases in cost sharing or decreases in benefits offered under the plan." 42 U.S.C. § 1395w-24(a)(5)(C)(ii). Pursuant to that authority, CMS limits an MAO's ability to adjust from one year to the next a plan's total beneficiary cost—a measure reflecting the Medicare Part B premium, the plan premium, and an estimate of the beneficiary's out-of-pocket costs. DX0014-163. Under the most recent version of the call letter, bids proposing changes in total beneficiary costs greater than $32 per member per month will be rejected.[27] DX0014-165.

Although this rule would constrain somewhat the merged firm's ability to increase premiums dramatically, it would not completely curtail it. Considerable leeway remains. For example, an MAO offering a plan with a $10 monthly premium could increase that premium by $10 (i.e. by 100%) without triggering the $32 threshold. Tr. 2013:25–2014:7 (Paprocki). In fact, because the threshold only measures changes from one year to the next, it would not prevent the MAO from imposing the same $10—or an even greater—price increase in subsequent years. Tr. 1226:22–1227:3 (Cavanaugh); Tr. 2014:15–19 (Paprocki). Indeed, the average Medicare Advantage plan premium of $40, see PX0553 (Frank Report) ¶ 40, could be increased each year by close to 80% without running afoul of the total beneficiary cost rule. As a result, this regulation also provides CMS with only very limited influence over plan price and quality.

At the start of trial, Aetna and Humana warned that the Court would likely hear from a "quite humble CMS" intent on downplaying the extent of its regulatory authority. Tr. 83:12–14 (opening statement). Throughout the trial, however, the companies sought to highlight various provisions of CMS guidance that they believe illustrate the true breadth of the agency's discretion

[27] There is some indication in the record that CMS may have the discretion to change this threshold. Tr. 1188:16–18 (Cavanaugh). But as far as the Court is aware, no such change is on the horizon.

and authority. In the call letter, for example, CMS explains that it "reserves the right to further examine and request changes to a plan bid even if a plan's [total beneficiary cost] is within the required amount"—that is, below the $32 per member per month threshold. DX0014-164. Likewise, in the bid instructions' section on margins, CMS warns that bids must "provide benefit value in relation to the[ir] margin level[s]" and that "[a]nti-competitive practices will not be accepted." DX0349-027. These broadly worded provisions, defendants contend, give CMS, which already enjoys considerable leverage in the bid review process, the tools that it needs to fend off price increases or quality reductions at the bid level.

But there is little historical precedent for CMS exercising such authority. By all accounts, CMS rarely questions the margins on specific bids. During the most recent bid cycle, for example, Aetna submitted 239 bids; CMS indicated that the margin was too high on three of them. Tr. 1930:8–19 (Paprocki). At Humana, Wheatley is unsure whether CMS even has that authority at all: in a 2014 email, he expressed the view that Humana has "to fight CMS regarding their ability to regulate our individual bid margins." PX0581; see also Tr. 576:24–577:21 (Wheatley). And as noted above, CMS has previously approved bids with fairly high margins. Tr. 2004:12–15 (Paprocki) (CMS has approved Aetna bids with margins of 13 and 14%); Tr. 2196:16–22 (Fernandez) (some Humana plans earn margins as high as 12 and 15%). Nor, it seems, is there precedent for CMS rejecting bids. Cavanaugh was not aware of a bid being rejected during his tenure at CMS. Tr. 1143:12–13 (Cavanaugh). Cocozza testified that an Aetna bid has never been rejected. Tr. 453:9–10 (Cocozza). In short, the record here suggests that CMS has not exerted considerable influence at the bid level before the proposed merger. That makes it very difficult for the Court to conclude that it would effectively do so after a merger.

Having reviewed the various regulatory provisions cited by the companies, and heard testimony from a number of CMS officials, the Court perceives little ability in CMS to prevent the merged firm from increasing its prices or reducing benefits. As several witnesses have testified, CMS regulations serve primarily to set "the boundaries or the contours" for competition between Medicare Advantage organizations. Tr. 3039:10–12 (Orszag); see also Tr. 138:10–13 (Frank) (CMS regulations define "the outer limits and the contours within which competition has to occur"); Tr. 1137:6–7 (Cavanaugh) (CMS creates "the framework that competition will happen within"). In that regard, regulation can be used to identify and correct a small number of plans that are "outliers." Tr. 1146:19–20 (Cavanaugh). But competition between Medicare Advantage plans remains the motor driving the creation and constant improvement of attractive plans for seniors. Indeed, if there is little in the CMS regulations that would prevent an affirmative price increase or benefit reduction, there is even less that would prevent a slow erosion of plan quality or increase in premiums resulting from lessened competition over time. CMS regulation, then, does not "significantly diminish[] the likelihood of major antitrust harm." Trinko, 540 U.S. at 881 (internal quotation mark omitted). Based on its significant HHI scores, the Aetna-Humana merger must be presumed to substantially lessen competition. The existence of some CMS regulation of Medicare Advantage does not rebut that presumption.

D. Entry

The companies also claim that entry by new competitors into the 364 complaint counties will counteract any anticompetitive effect of the merger. However, based on the applicable law, and an assessment of the expert and non-expert evidence for each specific element of the entry analysis, ultimately the Court concludes that new entry will not be "timely, likely, and sufficient" enough to counteract the anticompetitive effects of the merger.

1. Applicable Law

As part of its rebuttal case, a defendant may introduce evidence that entry by new competitors will ameliorate the feared anticompetitive effects of a merger. See Baker Hughes, 908 F.2d at 983; H&R Block, 833 F. Supp. 2d at 73–77; FTC v. Cardinal Health, 12 F. Supp. 2d 34, 54–58 (D.D.C. 1998); see also United States v. Waste Mgmt., Inc., 743 F.2d 976, 983 (2d Cir. 1984) (ease of entry, separate from actual entry, can constrain price). The Guidelines explain when new entry "alleviate[s] concerns about adverse competitive effects": when that entry would be "timely, likely, and sufficient in its magnitude, character, and scope to deter or counteract the competitive effects of concern." Guidelines § 9. Although the Guidelines are not binding, courts have frequently relied on their formulation of "timely, likely, and sufficient" to guide the analysis concerning entry. See, e.g., Baker Hughes, 908 F.2d at 988 (discussing Guidelines regarding entry); Cardinal Health, 12 F. Supp. 2d at 55–58 (discussing the "timely, likely, and sufficient" standard). Entry is timely, likely, and sufficient if it "fill[s] the competitive void that will result" from the merger. H&R Block, 833 F. Supp. 2d at 73 (internal quotation marks omitted). Although the defendants bear the burden of production on this—and every other—element of their rebuttal case, the government bears the ultimate burden of persuasion. Id.; Baker Hughes, 908 F.2d at 983 (citing Kaiser Aluminum & Chem. Corp. v. FTC, 652 F.2d 1324, 1340 & n.12 (7th Cir. 1981)).

2. Analysis

Aetna and Humana introduced evidence of recent new entry into several of the complaint counties. Conversely, the government introduced evidence that industry participants—when not preparing for or engaged in litigation—believe new entry into the individual Medicare Advantage market to be difficult. The parties also introduced expert analysis quantifying the likelihood, sufficiency, and timeliness of that entry based on data from past experience and econometric

models. The bulk of the evidence on this issue was presented through the testimony of Orszag and Nevo. Thus the Court begins there.

Both experts analyzed historical data to predict the likelihood of new entry, the probability that new entrants would replace the lost competition of Aetna and Humana, and the time horizon during which that new entry would happen. Orszag and Nevo agree that three key differences in their definitions of entry drive the differences in their results. First, Orszag defines "entry" more stringently than Nevo. Orszag only considers an MAO an "entrant" once it achieves a 5% market share in the relevant county, whereas Nevo considers an MAO an "entrant" as soon as it begins offering plans within a county. Orszag described this as a "5% threshold." He also counts the year in which the MAO achieved a 5% market share as the year in which it entered. He argues that including this 5% threshold focuses his calculations on competitively significant entry, rather than diluting his results with "competitively insignificant fluctuations" that are "not 'real' entry in any meaningful sense." See DX0418 (Orszag Reply Report) ¶¶ 89–90. Nevo responds that employing the threshold overstates the likelihood of success of a new entrant and obscures the timeline—in other words, that the use of the threshold means that Orszag's calculations answer the questions of how many MAOs entered and were moderately successful, and what market share those moderately successful MAOs achieved, rather than the questions of how many MAOs entered at all, how successful all MAOs were, and the timeliness of that entry. See PX0552 (Nevo Reply Report) ¶ 94.

Because Orszag counts an MAO as an "entrant" at the moment it crossed the 5% threshold, he counts an MAO as an "entrant" multiple times if that MAO achieves a 5% market share, then falls below that threshold, but then once again surpasses the threshold. See PX0552 (Nevo Reply Report) ¶ 92 & n.108. In other words, such an MAO would count as a "new entrant" twice (or

perhaps more) even if it never left the relevant county. This also means that Orszag's definition of entry counts an incumbent firm as a new entrant if the incumbent firm previously had less than a 5% market share, and then surpassed 5% in a subsequent year.

Importantly, Orszag includes Aetna and Humana in the historical data he uses regarding entry, whereas Nevo does not. Nevo argues that Aetna and Human must be excluded from the data because "neither Aetna nor Humana will be among the entrants who are available to mitigate the effects of the merger." PX0552 (Nevo Reply Report) ¶ 93. Orszag believes that keeping Aetna and Humana in the historical data allows more accurate forecasts because, were Aetna and Humana not present, another comparable MAO—presumably another large, sophisticated, well-funded MAO—would sense the same profit opportunity that Aetna and Humana would have and step into their shoes. See Tr. 3193:12–23 (Orszag).

Nevo runs multiple calculations using Orszag's data and definition of entry, but excluding Aetna and Humana from historical data, excluding incumbents, and using the actual year of entry (but still including the 5% threshold). He terms this "Orszag's corrected definition." PX0552 (Nevo Reply Report) ¶¶ 93–95. The Court will use that terminology as well. The discussion below examines the results of the experts' analysis as well as the non-expert evidence in the framework of determining the likelihood, sufficiency, and timeliness of entry.

(a) Likelihood of New Entry

When analyzing the likelihood of any entry at all, it makes sense to use Nevo's definition of entry, that is, one without any threshold. Under this definition, on average only 13.3% of the complaint counties had any entry in a given year between 2012 and 2016, and more than half experienced no entry during that five-year period. See PX0551 (Nevo Report) ¶ 253 & Ex. 25; Tr. 1656:8–18 (Nevo). One would expect this number to be higher than an equivalent calculation that

used the 5% threshold, because using a threshold would necessarily exclude some entrants. And in fact it is higher. Nevo ran the same calculation using his "corrected" version of Orszag's definition of entry (that is, including the 5% threshold, but excluding Aetna and Humana, excluding incumbent MAOs, and using the actual year of MAO entry), and found that under that definition, only 5.5% of complaint counties experienced any entry in a given year from 2012 through 2016. See PX0552 (Nevo Reply Report) ¶ 98 & Ex. 14.

But Orszag's analysis—without any "corrections" from Nevo—yields a higher number. He calculates that 20.7% of complaint counties experienced entry, on average, within a given year between 2012 and 2016. DX0419 (Orszag Report) Table II-10; PX0552 (Nevo Reply Report) Ex. 14. However, as discussed above, this calculation includes both Aetna and Humana in its historical data. The Court finds that doing so is not appropriate. By definition, Aetna and Humana would not be available to offset the competitive effects of their proposed merger. Orszag's decision to include them rests on the premise that were Aetna and Humana not present, another firm would take their place. See Tr. 3193:12–23 (Orszag). But that assumes the conclusion. The Court cannot rely on an analysis that assumes new competition will replace lost competition when trying to determine whether new competition will in fact replace the lost competition—to do so would be circular reasoning. Moreover, there is other evidence in the record to suggest that Aetna in particular is not a typical entrant—specifically, that Aetna is much more likely to enter new markets and succeed in those new markets than another market participant, even one of the Big 5. See, e.g., PX0551 (Nevo Report) ¶¶ 218, 220–23, 225 & Ex. 18; Tr. 1330:2–19 (Bertolini). In fact, of the 398 entrants in the complaint counties between 2012 and 2016 identified by Orszag, 191 of them (nearly half) are either Aetna or Humana. PX0552 (Nevo Reply Report) ¶ 93. This makes it especially inappropriate in assessing the likelihood of entry to rely on an analysis that

assumes a competitor will take Aetna and Humana's place once they are no longer available as potential new entrants.

Orszag also presents a more granular analysis of the potential entrants in the complaint counties that he argues shows that entry is more likely than the above numbers suggest. He identifies several types of potential entrants that, based on historical data, are particularly likely to enter: MAOs that offer individual Medicare Advantage plans in nearby counties (either in an adjacent county or elsewhere in the same state), MAOs that offer other types of Medicare Advantage plans in the relevant county (either special needs plans or group Medicare Advantage plans), or firms that offer commercial insurance in the relevant county. See DX0419 (Orszag Report) ¶¶ 147–148 & Table II-15 (showing probability that each of these types of MAOs would enter relevant county). Based on this analysis, Orszag identifies 1,684 potential entrants across all 364 complaint counties that fit into these categories and are therefore particularly likely to enter. See DX0419 (Orszag Report) ¶ 149. He shows that each complaint county has at least one or as many as twelve of these likely potential entrants; the average complaint county has five. See DX0419 (Orszag Report) ¶ 149 & Figure II-4.

This analysis by Orszag, moreover, aligns with the non-expert evidence Aetna and Humana introduced showing that some counties did experience new entry in recent years. Four of the eight MAOs offering plans in North Carolina—Cigna, Moses Cone Health, Gateway Health, and FirstHealth—entered within the past four years. Tr. 835:16–21 (Farley). At least three MAOs—Centene, Tenet Health, and United Health Services—either entered or expanded into new counties in the San Antonio market in recent years. Tr. 1046:18–1047:18 (Gonzalez); Tr. 2135:2–8, 2145:11–2146:23 (Fernandez). Two new MAOs—Centene and Eon Health—entered in Georgia in the past year. Tr. 2089:8–10 (Follmer). These plans, like the Humana and Aetna plans in

Georgia, offer "rich" benefits—that is to say, low out-of-pocket costs for consumers, in the form of a "zero premium, zero PCP [primary care physician] plan, and zero co-pays for drugs." Tr. 2092:8–15 (Follmer). BlueCross BlueShield started offering a Medicare Advantage plan in Louisiana last year—the "[e]ntrants coming in and out of states . . . it's part of the business, and it happens every year." Tr. 2093:4–2093:9 (Follmer).

But the Court does not find this more granular analysis persuasive. First, it suffers from the same weakness that Orszag's basic entry analysis does: it includes Aetna and Humana in the historical data that forms the basis of the analysis. Once Aetna and Humana are removed, the number of likely potential entrants decreases dramatically. Nevo uses Orszag's own model and data to show that, with Aetna and Humana removed, 99 of the 364 counties have less than a 5% chance of experiencing any entry, and the median county has only a 9% chance of experiencing any entry. See PX0552 (Nevo Reply Report) ¶ 100 & Ex. 15.

Second, Orszag's testimony during trial demonstrated that although he identified 1,684 likely potential entrants, that number might significantly overstate how many of those MAOs would actually enter the complaint counties or achieve any substantial market share. For example, he identified Mecklenburg County, North Carolina (which includes Charlotte) as an example of a complaint county with three likely potential entrants: Cigna, Moses Cone Health, and FirstHealth. Tr. 3290:6–16 (Orszag). (This is consistent with Farley's testimony, discussed above). But Orszag acknowledged that Cigna is currently under CMS sanction and cannot enroll new members in its Medicare Advantage plans; therefore, it is unable to expand into a new county until those sanctions are lifted. Tr. 3290:17–22 (Orszag); see also Tr. 329:20–330:4 (Cocozza) (explaining Cigna's restrictions due to sanctions). Orszag also acknowledged that both Moses Cone and FirstHealth are provider-based plans tied to those providers' specific hospital systems outside of the Charlotte

area, and to enter Mecklenburg County, they would likely need to contract with a hospital system in Charlotte. Tr. 3296:18–3299:19 (Orszag). There is evidence that would be unlikely. Thus, while Mecklenburg County has three potential entrants under Orszag's analysis, none are actually likely to enter. Similarly, Orszag acknowledged that the fourth entrant in North Carolina (but not in Mecklenburg County) that Farley identified, Gateway Health, had only 54 members in Wake County, North Carolina, which Orszag would not even count as an "entrant" in that market. Tr. 3300:13–3301:17 (Orszag). This casts some doubt on how many of the rest of Orszag's 1,684 likely potential entrants are truly likely to enter the complaint counties.

Hence, based on the expert analysis that the Court finds persuasive—the analysis excluding Aetna and Humana from historical data on entry—either 13.3% or 5.5% of complaint counties have experienced new entry in any given year over the past five years. Case law does not provide a particular threshold above which entry is likely enough to allay fears of anticompetitive harm, nor did the parties provide one in their briefing or at closing arguments. But the core inquiry is whether entry is timely, likely, and sufficient enough to replace the lost competition from the merger. The Court finds that if only 13.3% or 5.5% of complaint counties experience any new entry per year, then entry is not likely enough to allay these concerns.

This is corroborated by the non-expert testimony indicating that industry leaders believe there are significant barriers to entry in the individual Medicare Advantage market. The government argues that the barriers to new entry are (1) the difficulty in building a competitive provider network, and the needs for (2) high star ratings, (3) a strong brand, and (4) Medicare Advantage-specific operational expertise and IT infrastructure. The President of Humana's Retail Segment (the Humana division responsible for Medicare Advantage) testified that "[t]he hardest part about getting into this business is knowing how to build networks, knowing how to file

products, knowing how to manage CMS compliance, [and] knowing how to think about star ratings." Tr. 631:13–16 (Wheatley). These barriers may be more applicable to competitors who are brand new to Medicare Advantage than to firms that offer Medicare Advantage in other counties and are considering expanding. Tr. 1206:11–13 (Cavanuagh) ("a company like Aetna that has more resources and can build a robust network might have an ability to be more competitive than a small regional provider").

In light of these barriers, the government introduced statements from industry participants indicating that industry members believe entry is difficult. The CEO of Humana has stated publicly that barriers to entry are increasing in the Medicare Advantage market, and therefore "the stronger will get stronger and the weaker will get weaker." PX0551 (Nevo Report) ¶ 251. A Humana business plan acknowledged some of Humana's challenges in expanding Medicare Advantage into new regions, noting that "[n]ew market entry presents several challenges, including building local competitive intelligence, developing provider relationships, and understanding the nuances of local distribution." DX0506-048. Aetna's internal documents convey the same perspective. The President of Aetna's Medicare product line has stated that "Medicare has unique aspects that require a clinical engagement approach, scorecard, stars element and coding/revenue attention that is different" from other forms of health insurance. PX0007-848. Another Aetna executive specifically acknowledged that the growth and increasing importance of value-based contracts "[c]reates barriers to entry to other payers." PX0603-358. In-court testimony confirmed that Cocozza believes an insurer's track record in operating "viable, successful Medicare Advantage plans" is important in convincing a provider to enter into a value-based contract—indicating that a new entrant might struggle to do so. See Tr. 348:1–18 (Cocozza).

The Court finds this evidence persuasive. These statements were primarily made in the ordinary course of business and are therefore likely to accurately reflect an unvarnished viewpoint. They express the opinion of knowledgeable industry leaders. And they are consistent with the expert analysis. Together, the expert analysis and the other evidence paint a picture of new entry not being particularly likely, and the barriers to entry being high.

(b) Sufficiency of New Entry

The analysis of the sufficiency of new entry is simpler because, despite the different conclusions that the experts draw, the actual data show that there is a relatively low probability that new entry would be sufficient to replace the lost competition of Aetna or Humana regardless of which expert approach is used.

To determine how likely all new entrants (as a whole) are to replace the competition lost by the merger, one must first determine the market share of the smaller of the two defendants in each of the complaint counties. See PX0551 (Nevo Report) ¶ 255. In 77% of the complaint counties, the smaller of Aetna or Humana has a market share above 10%. PX0551 (Nevo Report) ¶ 255. In fact, in nearly half of the counties, the smaller of Aetna or Humana has a market share of over 20%. PX0551 (Nevo Report) ¶ 255. These numbers are uncontested.

Using Nevo's definition of entry, nationwide 19.1% of new entrants gain a market share of above 10%. PX0551 (Nevo Report) ¶ 256. Nevo then calculated that, in the median complaint county, there is a 10.3% chance that all new entrants (combined) would replace competition lost by the merger, and a 9.9% chance that an individual new entrant would replace competition lost by the merger. PX0552 (Nevo Reply Report) Ex. 27 (10.3% probability for all entrants combined) & Ex. 26 (9.9% probability for individual entrant). That calculation does not use a 5% threshold, and therefore one would expect the result to be lower than the corresponding one calculated by

Orszag. In fact, that is the case. Using Orszag's full definition of entry—with the 5% threshold, with Aetna and Humana's historical data, with incumbents, and using the year that an entrant surpassed 5% as the year of entry—an entrant who achieves a 5% market share goes on to achieve a 33% mean market share within three years, and a 27% median market share within three years. DX0419 (Orszag Report) ¶ 134 & Table II-11. But again, it is illogical to include Aetna and Humana's historical data, for the reasons discussed earlier. Excluding Aetna and Humana historical data from the calculation and using the actual year of entry, but otherwise employing Orszag's definition of entry, an entrant who achieves a 5% market share goes on to achieve only a 16% mean market share within three years, and a 7% median market share within three years. PX0552 (Nevo Reply Report) ¶ 109. This results in a median probability of only 10.2% that an individual new entrant would replace the competition lost by the merger in a given county. PX0552 (Nevo Reply Report) ¶ 112 & Ex. 17.[28] This analysis is persuasive, and alone is enough to conclude that entry is not likely to be sufficient.

But even using Orszag's full definition of entry with no alterations, in the median complaint county there is only a 25.5% chance that new entrants will replace the lost competition from the merger. So, even if the Court were to fully embrace Orszag's definition of entry and reject Nevo's, the Court would still find that new entrants would not be sufficient to "fill the competitive void" from the merger. H&R Block, 833 F. Supp. 2d at 73 (internal quotation marks omitted).[29]

[28] Neither of Nevo's reports used Orszag's "corrected" definition, with a 5% threshold, to calculate the probability that all new entrants combined would replace the lost competition.

[29] The government points out that Orszag used 2012 through 2016 data when determining the likelihood of entry, but only used 2013 through 2016 data when evaluating the success of that entry. Pls.' Proposed Findings & Conclusions at 129. The government argues that this is Orszag's attempt to present the data in a misleading manner: 2012 saw more entry than most subsequent years, and 2012 entrants failed at a significantly higher rate than entrants in subsequent years. Id.; DX0419 (Orszag Report) ¶ 128 & Table II-10 (more entrants in 2012 than in most subsequent years); Tr. 3287:5–3288:14 (Orszag) (acknowledging that he did not use 2012 data and that those entrants failed at a higher rate). But for the complaint counties, there were fewer entrants in 2012 than in subsequent years, making the effect of excluding 2012 from the data unclear. See DX0419 (Orszag Report) ¶ 128 & Table II-10. Regardless, it is not necessary to evaluate the implications of omitting 2012 data from some of Orszag's analyses.

(c) Timeliness of New Entry

Orszag built a model to "quantif[y] the likelihood that another MAO will enter in one, two, or three years" when the number of MAOs in a given county is below the equilibrium number of MAOs for that county. DX0419 (Orszag Report) ¶ 138. He defines equilibrium within a county as when "it is not profitable for any MAO to exit or enter." DX0419 (Orszag Report) ¶ 140. He calculates the equilibrium number of MAOs in a given county based on the number of MAOs present in a particular year, the number of MAOs present in past years, and certain characteristics of that county that are correlated with profitability. DX0419 (Orszag Report) ¶ 141. Once he has calculated an equilibrium number of MAOs for a given county, he can then calculate the rate at which the actual number of MAOs converged on the equilibrium number. DX0419 (Orszag Report) ¶¶ 143–44. Based on this model, he ultimately concludes that within three years, 87% of the gap between the actual and equilibrium number of MAOs will be closed. DX0419 (Orszag Report) ¶ 145 & Table II-14.

Nevo does not build his own countervailing model. Rather, he critiques Orszag's model as uninformative because it is built on circular logic: it estimates an equilibrium number of MAOs based on the number of actual MAOs present, and then tries to predict how many and how quickly MAOs will enter to achieve that number in the future. See PX0552 (Nevo Reply Report) ¶ 104. Nevo describes this model as "non-standard." PX0552 (Nevo Reply Report) ¶ 104 n.129. Instead, he looks to the historical experience following the Humana-Arcadian merger in 2012. He finds that, following that merger, only 33% of the counties that met the presumption of unlawfulness based on market concentration—presumably, prime candidates for entry—experienced any entry in the four years following the merger. PX0551 (Nevo Report) ¶ 238. Of the 33% of presumption

counties that had any entrants, 73% of them only received their first entrant during year 3 or year 4 after the merger. PX0552 (Nevo Reply Report) ¶ 108.

The Court finds Nevo's critique of Orszag's model for equilibrium and timely entry to be persuasive. Orszag's model only yields informative results with respect to timeliness if its estimates of the equilibrium number of MAOs are correct. But there is no evidence, either in this record or in academic literature brought to the Court's attention, to support the theory that an equilibrium number of MAOs can be deduced from the current number of firms. Orszag did testify that the concept of an equilibrium number of firms, and the rate at which a market adjusts to reach that number, is a common economic concept. See Tr. 3098:3–3099:13 (Orszag). But he presented no specific citations or other evidence to explain when or how models estimating an equilibrium number of firms overcome the circularity concern, and how this particular model does so. The Court, therefore, will not rely on the timeliness calculations resulting from Orszag's model. The Court finds Nevo's analysis of the timeliness of entry following the Humana-Arcadian merger more informative, although only somewhat persuasive. The parties presented evidence on whether the Humana-Arcadian merger is comparable for the purpose of evaluating the effects of divestiture, but little evidence on how the relevant counties might compare to the complaint counties here with respect to new entry. See, e.g., Tr. 3128:12–3129:19 (Orszag). Ultimately, then, the Court is reluctant to draw conclusions from what may or may not be an appropriate historical analogue. Thus, the Court cannot draw firm conclusions on the timeliness of new entry were this merger to occur.

3. Summary

Given the analysis of sufficiency and likelihood, the Court finds that, overall, new entry would not be timely, likely, and sufficient to replace the competition lost by the merger. The most

persuasive expert analysis demonstrates that entry is likely to occur in, at most, an average of 13.3% of the complaint counties per year. Moreover, using the analysis most favorable to the defendants, there is just a 25.5% chance that new entrants will replace the lost competition in the median county. That number drops dramatically—to approximately 10%—if one excludes Aetna's and Humana's past performance from the historical data used to create a projection. So, even under the most generous of the plausible calculations the median county has a 13.3% chance of experiencing any entry, and a 25.5% chance that this new entry will be sufficient to replace the lost competition. There is therefore a relatively small chance overall of replacing the competition lost by the proposed merger. This rebuttal argument based on entry therefore fails.

E. Molina Divestiture

Defendants' next rebuttal argument is that the proposed divestiture of certain assets to Molina Healthcare would counteract any anticompetitive effects of the merger. Molina[30] is a health insurer that has historically focused on offering Medicaid, and Medicaid-related, insurance plans. This section first explains the applicable law, and then provides background on Molina, the process by which Aetna, Humana, and Molina agreed to the divestiture, the terms of the divestiture agreement, and the barriers to the divestiture. Next, it summarizes and evaluates the evidence as to whether Molina would successfully replace the competition lost by the merger—including the statements made by Molina executives and board members at the time, Molina's history in the Medicare Advantage market, and the purchase price. Finally, it briefly considers the expert testimony, before reaching the ultimate conclusion that the proposed divestiture would not replace the competition lost due to the merger.

1. Applicable Law

[30] This opinion uses the term "Molina" to refer to the corporate entity. The Court heard testimony from Molina's CEO, Dr. Mario Molina (Dr. Molina), and the CFO, John Molina (Mr. Molina).

In rebuttal, a defendant may introduce evidence that a proposed divestiture would "'restore [the] competition'" lost by the merger counteracting the anticompetitive effects of the merger. See Sysco, 113 F. Supp. 3d at 72 (quoting Ford Motor Co. v. United States, 405 U.S. 562, 573 (1972)). A divestiture must "effectively preserve competition in the relevant market." U.S. Dep't of Justice, Antitrust Division Policy Guide to Merger Remedies 1 (2011) ("Remedies Guide"). In other words, the divestiture must "replac[e] the competitive intensity lost as a result of the merger." Sysco, 113 F. Supp. 3d at 72 (internal quotation marks omitted). Like the Merger Guidelines, the Remedies Guide is frequently used by courts to guide their analysis, although it is not binding law. Id. Divestiture of an "existing business entity" might be more likely to "effectively preserv[e] the competition that would have been lost through the merger," because it would have the "personnel, customer lists, information systems, intangible assets, and management infrastructure" necessary to competition, but divestiture of some lesser set of assets might be appropriate when the purchaser already has, or could easily attain, the other capabilities needed to compete effectively. See Remedies Guide 8–9. Courts are skeptical of a divestiture that relies on a "'continuing relationship[] between the seller and buyer of divested assets" because that leaves the buyer susceptible to the seller's actions—which are not aligned with ensuring that the buyer is an effective competitor. Sysco, 113 F. Supp. 3d at 77 (quoting FTC v. CCC Holdings, Inc., 605 F. Supp. 2d 26, 59 (D.D.C. 2009)); see also White Consol. Indus. v. Whirlpool Corp., 781 F.2d 1224, 1227–28 (6th Cir. 1986).

Defendants in a merger challenge bear the burden of producing evidence tending to rebut the government's prima facie case. See Baker Hughes, 908 F.2d at 982; Staples, 970 F. Supp. at 1089. Part of that burden of production includes producing evidence that the divestiture will actually occur. Cf. FTC v. Arch Coal, Inc. No. 04-0534 (JDB), slip op. at 5 (D.D.C. July 7, 2004).

Obviously, defendants cannot produce evidence showing that the divestiture would create an effective competitor unless they first produce evidence that the divestiture is likely to occur. But, of course, antitrust deals in "probabilities, not certainties." Brown Shoe, 370 U.S. at 323. Hence, the divestiture need not be iron clad for a court to consider it. Rather, once the divestiture is sufficiently non-speculative for the court to evaluate its effects on future competition, then further evidence about the likelihood of the divestiture goes to the weight of the evidence regarding the divestiture's effects.

2. Background on Molina

Although the parties hotly contest the effect of the proposed divestiture to Molina, they do not contest the basic facts about Molina. Molina's core business is Medicaid. Tr. 2336:21–2337:2 (Dr. Molina). It was founded in 1980 by the father of the current CEO, Dr. Mario Molina, and the current CFO, John Molina. Tr. 2200:23–2201:12 (Dr. Molina). It was initially founded as a medical clinic for Medicaid enrollees, and then expanded into providing health insurance in 1994. Tr. 2200:24–2201:21 (Dr. Molina). It became a publicly traded company in 2003. Tr. 2205:19–23 (Dr. Molina).

Today, the bulk of its members are in Medicaid plans. At the time of trial, Molina had approximately 4.2 million members. Tr. 956:4–6 (Mr. Molina).[31] Of that total, approximately 550,000 are enrolled in individual commercial plans through the public exchanges. Tr. 958:1–4 (Mr. Molina). Another approximately 100,000 are enrolled in plans for persons who are eligible for both Medicare and Medicaid, known as dual-eligibles. Tr. 1010:2–5 (Mr. Molina); 2214:6–13

[31] There are some discrepancies in Molina's enrollment data, stemming from whether data for the 2015 plan year is used, or more recent but unverified data from the 2016 plan year is used. For example, Molina's 2015 annual report stated it had 3.5 million members, PX0230 at 2, while Mr. Molina testified that it currently has 4.2 million members, Tr. 956:4–6 (Mr. Molina), and Dr. Molina testified that it has 4.3 million members, Tr. 2204:19–25 (Dr. Molina). These discrepancies are not important to the analysis.

(Dr. Molina). Molina offers two types of these plans: a dual-eligible special needs plan (D-SNP) and a Medicare-Medicaid Plan (MMP). A D-SNP is a type of Medicare Advantage plan, but is not an individual Medicare Advantage plan in the market at issue in this case. An MMP is a demonstration plan, that is, a pilot program run by CMS. See Tr. 960:1–3 (Mr. Molina). Approximately half of those 100,000 members are in MMPs, and half are in D-SNPs. Tr. 1010:6–10 (Mr. Molina). Molina has only approximately 424 enrollees in individual Medicare Advantage plans. Tr. 1010:11–14 (Mr. Molina). Approximately 3.5 million are enrolled in Medicaid plans.

Molina offers its plans in 12 states plus Puerto Rico.[32] Tr. 955:24–956:3 (Mr. Molina). It offers Medicaid plans in all of those locations, and commercial plans through the exchanges in nine of those states. Tr. 2349:14–25 (Dr. Molina). Molina also serves as the Medicaid claims processing contractor for five states. Tr. 2233:4–8 (Dr. Molina). In 2016, it offered individual Medicare Advantage plans in only six counties across two states: California and Utah. PX0559 (Burns Report) ¶ 559, Exs. 1 & 3; see also Tr. 960:21–961:4 (Mr. Molina). For 2017, it will only offer individual Medicare Advantage plans in Utah. Tr. 2293:9–2294:3 (Dr. Molina).

Much of Molina's growth has occurred in recent years. Molina's membership has more than doubled in the past three years, from 1.9 million members in 2013 to 4.2 million at the end of 2016. Tr. 956:4–6 (Mr. Molina); PX0230 at 2. Obviously, none of that growth has been in individual Medicare Advantage plans. Molina's revenue has also increased four-fold over the past five years, from $4.2 billion in 2011 to near $17 billion in 2016. Tr. 2203:11–15 (Dr. Molina); PX0230 at 2. Much of that growth is through acquisitions: in 2015 alone, it had approximately 10 acquisitions. Tr. 1000:5–8 (Mr. Molina); Tr. 2260:9–12 (Dr. Molina); DX0133; DX0140-014–16.

[32] Again, other documents, including Molina's 2015 annual report, state that Molina offers plans in 11 states plus Puerto Rico. See PX0230 at 2.

It currently has a market capitalization of $3.09 billion, and is a Fortune 500 company.[33] Tr. 2207:6–11, 2382:24–2383:4 (Dr. Molina).

Despite focusing on Medicaid, Molina has made forays into the individual Medicare Advantage market in the past. None have succeeded, although the parties disagree as to why. Throughout its history, Molina has sold individual Medicare Advantage plans in a total of 63 counties. PX0559 (Burns Report) ¶ 42. Its most significant expansion into Medicare Advantage started in 2008. PX0092-680. By 2011, it had enrolled only 4,620 members across eight states in these plans. PX0092-680. And by early 2012, it had decided to exit from all of those states except New Mexico. See PX0249-923; PX0559 (Burns Report) ¶ 46. As explained in a 2011 memo from Lisa Rubino, the Molina executive responsible for its Medicare business, the plans were losing money because the "benefits, network and formulary" for pharmacy benefits were "average to below average" as compared to competitors. PX0092-681; see also PX0242 (internal email discussing same); PX0107-710 (internal email discussing same). Molina later withdrew from New Mexico as well for similar reasons. PX0559 (Burns Report) ¶¶ 46–48.

Another of Molina's experiences in individual Medicare Advantage came when it acquired a health insurer in Wisconsin called Abri in 2010. See Tr. 2303:5–15 (Dr. Molina). A year later, Molina exited the individual Medicare Advantage portion of that business. Dr. Molina testified that Abri's individual Medicare Advantage plans were struggling when Molina made the acquisition, and Molina was not permitted to run the plans directly because the contract required that they continue to be operated by a third party. Tr. 2386:3–20 (Dr. Molina). Thus the company made a strategic decision to cease offering those plans. Tr. 2386:3–20 (Dr. Molina). Molina's most recent effort to expand into Medicare Advantage began in 2014, when it started offering the

[33] The transcript also states "$3.09 million" but that is a transcription error. See Tr. 2295:8–11 (Dr. Molina).

individual Medicare Advantage plan in Utah that it still operates today (although with only about 400 members). See Tr. 2375:8–13 (Dr. Molina).

Molina's effort to expand into Medicare Advantage through this divestiture began in June 2016. Aetna and Human approached 14 potential buyers about a sale of certain Aetna and Humana assets. PX0536 at 7. Ultimately, only five potential buyers submitted initial bids. PX0536 at 7; Tr. 1346:7–14 (Bertolini). Of those, just three submitted bids for all of the divestiture assets: Molina, InnovaCare, and WellCare. PX0536 at 7. InnovaCare operates only in Puerto Rico. Tr. 392:11–20 (Cocozza). WellCare had trouble with law enforcement, as well as with CMS compliance. Tr. 393:8–14 (Cocozza). Aetna and Humana selected Molina as the divestiture purchaser. See PX0433 (Aetna analysis of divestiture bids). Molina ultimately paid approximately $401 per member acquired, or $1,400 per member including statutory capital (that is, the capital that an insurer must set aside to maintain its insurance license). Tr. 2252:9–14 (Dr. Molina); DX0262-234; DX0264-230.

Aetna and Humana each entered into an Asset Purchase Agreement (APA) and Administrative Services Agreement (ASA) with Molina. See DX0262 (Humana and Molina); DX0264 (Aetna and Molina). Under the agreements, the defendants will transfer to Molina certain Medicare Advantage plans that include approximately 290,000 members in as many as 437 counties. See DX0262-019, 218–22; DX0264-019, 216–19. The divested plans cover 21 states, and all 364 complaint counties. See DX0262-218–22; DX0264-216–19. Under the ASA, Aetna and Humana will continue to operate the divested plans for the remainder of the calendar year in which the merger closes. If it closes in 2017, then Molina has the option to extend the ASA for up to two 6 month periods. DX0262-110; DX0264-109; Tr. 2462:10–15 (Rubino). During that time, all plan administration services, such as IT, claims processing, and broker services, will be

managed by Aetna and Humana. DX0262-095; DX0264-094. Their contracts with providers will still be in place, and members may continue to see their own providers. Tr. 2459:7–17 (Rubino); Tr. 2510:15–20 (Buckingham); DX0017. However, a provider may be able to withdraw from that network during the period of the ASA, depending on the terms of that provider's contract with Aetna or Humana. See Tr. 3747:6–15 (post-trial argument). After the ASA expires, the divested plans will be fully operated by Molina.

3. Whether the Divestiture Will Occur

The parties disagree over how likely the divestiture is to happen, and the implication of that assessment. The government identifies several hurdles—including ones outside of the parties' and Molina's control—to the divestiture. First, CMS must approve the novation, that is, the transfer of CMS's contracts with Aetna and Humana to Molina. See 42 C.F.R. § 422.550(c) (defining novation); DX0262-063 (novation a condition of closing); DX0264-063 (same). Although CMS has a policy against approving novations that are not an entire "book of business," so as to prevent insurers from selling off portions of plans, this policy is sub-regulatory and not binding on the agency. See Tr. 1153:11–1154:10 (Cavanaugh); PX0104 at 538–39, ch. 12 § 30.3 (CMS Medicare Managed Care Manual describing "entire book of business" policy). CMS approved a novation of less than an entire book of business in the Humana-Arcadian merger in 2012, when a court permitted the merger if it was accompanied by a divestiture, and a CMS official testified that CMS was likely to do so again here if necessary. See Tr. 2573:11–2575:23 (Coleman). Thus, the novation requirement does not appear to be an insurmountable barrier to the divestiture proceeding, even though it raises some doubt.

Second, Molina has the opportunity to withdraw from the divestiture agreement if CMS does not give "reasonable adequate assurances" that the plans' star ratings will transfer to Molina.

DX0262-064 (APA § 6.02(e)); DX0264-063–64 (APA §6.02(e)). Such a transfer would be contrary to CMS's usual practice of assigning the purchaser's new contract with CMS the average star rating of that purchaser (i.e., of Molina). See DX0151-026–27; DX0349-009. However, Molina has expressed an interest in continuing with the divestiture even if the star ratings do not transfer over. Tr. 987:4–13 (Mr. Molina); Tr. 2388:16–2389:9 (Dr. Molina).

Finally, state insurance regulators have expressed concern with the merger and divestiture. See PX0476 ¶ 22 (Florida Office of Insurance Regulation noting that divestiture "is not in the best interest of policyholders in the state of Florida"); PX0076 (Missouri Department of Insurance preliminary order blocking merger). As Dr. Molina acknowledged, the merger is "not a done deal." Tr. 2381:9–22 (Dr. Molina).

However, the Court need not reach a conclusion on whether the divestiture would occur if the Court approved the merger accompanied by the divestiture. Rather, Molina has shown that it is sufficiently likely to occur for the Court to at least consider evidence of the effect of the merger: CMS does not seem likely to block the novations, and the remaining barriers are largely within Aetna, Humana, and Molina's control. This is sufficient for the Court to consider the effects of the divestiture, and to consider the likelihood that it would not occur as a factor going to the weight of the evidence. Ultimately, however, given that the Court finds that the divestiture would not counteract the loss of competition from the proposed merger even if it were to occur as planned, there is no need for the Court to further consider the divestiture's likelihood.

4. Analysis

Aetna and Humana have advanced four affirmative arguments for why Molina would be a successful competitor in the Medicare Advantage market following the divestiture. The Court

considers these in turn, then considers the low purchase price, Molina's history in the individual Medicare Advantage market, and the expert testimony.

(a) Defendants' Affirmative Arguments

Defendants argue, first, that Molina has the capability to provide care management to lower-income populations; second, it will be able to build competitive provider networks; third, it has the internal capacity to manage the divested health plans; and fourth, it will be able to use marketing and brokers to retain members (i.e., the 290,000 divested members) and attract new members. However, although defendants advance much evidence of Molina's capabilities, ultimately each of these arguments is undermined by other contradictory evidence presented at trial, especially statements made by Molina executives and board members while the deal was being negotiated.

i. Care Management

Defendants assert that a key reason Molina will be successful in the Medicare Advantage market is its skill in providing care management in the Medicaid market. See Tr. 2231:25–2232:10 (Dr. Molina). Molina's Medicaid population tends to have particularly complex health needs. Its dual-eligible members have, on average, 4.5 chronic medical conditions, as opposed to one chronic medical condition for its individual Medicare Advantage members. Tr. 2230:24–2231:5 (Dr. Molina). Molina's Medicaid and dual-eligible members often have other barriers to good health as well, such as drug abuse and homelessness. Tr. 2231:6–24 (Dr. Molina). Defendants argue that if Molina can successfully manage this population, then it is well suited to manage care for the healthier, more affluent Medicare Advantage population. See Tr. 632:21–633:4 (Wheatley).

The government does not dispute Molina's care management experience in the Medicaid and dual-eligible populations or the importance of care management to successfully operating

Medicare Advantage plans. See Tr. 1232:8–1233:8 (Burns) (care management as one of the six engines of a successful MAO). Indeed, as discussed above, the core value proposition of Medicare Advantage is that private MAOs can coordinate care better than Original Medicare, and therefore provide better quality care at a lower price.

Instead the government contests whether Molina will be able to transfer this care management expertise in Medicaid and dual-eligible plans over to Medicare Advantage. The government argues that because of Molina's lack of provider networks—and specifically value-based provider networks—in nearly all of the complaint counties, it will not be able to provide that care coordination to the acquired members. And because Molina has never offered a PPO, the argument goes, it does not know how to provide care management in that context. See Tr. 983:14–17 (Mr. Molina) (acknowledging that Molina has never offered a PPO). A PPO generally gives a member access to a broader network of providers, and does not require the primary care physician to serve as a "gatekeeper." Approximately 60% of the divested plans are PPOs. Tr. 983:18–21 (Mr. Molina); Tr. 2397:13–17 (Rubino). This fact surprised Mr. Molina when he first learned it. In an email to Rubino on August 16, 2016—approximately two weeks after Molina agreed to the divestiture—Mr. Molina stated "[H]ow did we miss this?!" PX0247; Tr. 983:24–984:17 (Mr. Molina). Indeed, there is some evidence that Molina has in the past avoided trying to attract members from PPO plans. See PX0250 (October 2011 email from Rubino stating as to PPO members that "I don't think we need to go after them").

ii. Provider Networks

There is no dispute that provider networks are an essential component of offering a competitive Medicare Advantage plan. See PX0559 (Burns Report) ¶ 69; Tr. 292:1–5, 292:24–293:8, 318:3–7 (Cocozza); PX0102-449 (email from Rubino stating that if Molina loses essential

providers, it "will lose members in droves"); PX0015-846, -856 (Humana disenrollment survey identifying provider network as a key reason members leave plans); Tr. 296:10–21 (Cocozza) (members often leave plans if their provider is no longer in-network). But there is sharp disagreement over whether Molina will be able to build provider networks to serve the 290,000 members acquired in the divestiture. Molina has no presence in 89% of the complaint counties, and no Medicare presence in 95% of them. PX0650 (Burns Reply Report) ¶ 5. Currently, Molina has some presence in 39 of the 364 complaint counties, and 114 of the 437 divestiture counties overall. Tr. 1243:15–24 (Burns).[34] Of those 39 counties, it only has any Medicare presence (through its dual-eligible plans) in 15 counties. Tr. 1244:3–7 (Burns). And although Molina has a network of non-dual Medicare Advantage providers in six counties, these are not part of the divestiture counties or complaint counties. Tr. 1244:13–18 (Burns).

Molina is not acquiring Aetna's or Humana's provider contracts. Tr. 380:5–9 (Cocozza); Tr. 2538:9–23 (Buckingham). It therefore will need to build its non-dual Medicare Advantage provider network essentially from scratch in all 364 complaint counties, in 325 of which it has no presence whatsoever.

Although Molina does not dispute these numbers, it views them differently. Rubino testified that of the 290,000 members in the divestiture plans, 90% of them are in 12 states. Tr. 2402:16–24 (Rubino). Molina has some presence in 6 of those 12. Tr. 2403:12–25 (Rubino). Rubino also identified the top 20 hospitals and 50 providers in the divestiture plans—based on information from Aetna and Humana—and determined that Molina already has some sort of relationship with a significant number in those 6 states. Tr. 2404:14–2405:13 (Rubino); see

[34] Burns notes that Aetna is not offering Medicare Advantage plans in 2017 in 2 of the 364 complaint counties. See PX0559 (Burns Report) ¶ 11 n.1. This opinion continues to use the number 364, rather than 362, for clarity and consistency. Burns' reports, and some portions of the transcript, refer to 362 rather than 364 counties.

DX0145 (Molina analysis of network overlap). Thus, although Molina has no Medicare presence in the vast majority of the complaint counties, Rubino believes that it already has relationships with a large portion of the key providers.

The parties also disagree on whether Molina can build adequate provider networks in the time available. Rubino testified that in a market where Molina has some presence, it might only take two to three months, while in a new market it might take four to six months. Tr. 2400:6–17 (Rubino). Renee Buckingham, the Humana executive responsible for managing the divestiture testified that building a network in a new market might take seven to eight months. See Tr. 2521:16–2522:3 (Buckingham) ("late summer or early fall" through February). She also stated that value-based contracts that include downside risk for the provider—that is, the possibility of losing money based on poor performance—take "much longer to negotiate." Tr. 2521:7–14 (Buckingham). The president of Aetna's Medicare business testified that it can take up to 18 months to build a provider network that meets CMS network adequacy requirements in a new market. Tr. 342:6–13 (Cocozza). She also testified that it could take up to a year even in a market where Aetna has a pre-existing relationship with providers. Tr. 342:14–17 (Cocozza).

Under CMS's network adequacy requirement, each plan must have a sufficient network before it can be offered to consumers. Tr. 1140:6–16 (Cavanaugh). This network adequacy requirement is "robust" and "very stringent," and the companies try to build networks that are broader than what CMS requires. See Tr. 291:8–16 (Cocozza); Tr. 547:8–20 (Wheatley). An MAO must submit network information for adequacy review in February of the year prior to the plan. Tr. 341:21–342:5 (Cocozza). Therefore, if the divestiture occurs in early 2017 and Molina

extends the ASA as long as possible—through the end of 2018—Molina would have approximately one year to create provider networks that would meet the adequacy requirement.[35]

There was conflicting testimony about the difficulty of building provider networks. Rubino testified that the process of building provider networks is "quite easy" in Medicare Advantage where the rates cluster closely around Original Medicare rates. See Tr. 2398:7–10, Tr. 2403:3–11 (Rubino) (Medicare Advantage rates are 95-100% of Original Medicare rates); see also Tr. 2515:8–2516:5 (Buckingham) (Medicare Advantage rates similar to Original Medicare rates). In Medicaid rates are often as low as 70% of the Medicare rates, leading to more difficult contract negotiations. See Tr. 2263:16–22 (Dr. Molina). Buckingham testified that an MAO's scale in a marketplace may not affect the provider rates it is able to negotiate, because Medicare Advantage provider rates are driven by Original Medicare provider rates. See Tr. 2515:8–2516:18 (Buckingham). Defendants introduced evidence that the process of contracting with providers is straightforward, and consists largely of reaching out to physicians by mail or phone to sign standardized contracts, and meeting with hospitals in person. See Tr. 2398:7–2400:5 (Rubino); Tr. 2511:10–2512:14 (Buckingham). Buckingham also testified that Molina will be well positioned to create provider networks because it will already know which providers are in Aetna's and Humana's networks for the divestiture plans, and therefore which providers those 290,000 members want. Tr. 2522:21–2523:2 (Buckingham); see also Tr. 2404:14–2405:13 (Rubino).

In fact, Molina is so confident in its ability to build a provider network that Dr. Molina would prefer to develop new contracts with providers rather than take over existing Aetna or

[35] One document suggests that for counties where Molina already has a Medicare network through its dual-eligible plans, it would not need to submit network adequacy information in February. See PX0090-195 ("The beauty of existing states and service areas [is] we avoid the Feb Firedrill[.] we just have to deliver by bid time[.]"). In that case, Molina would have approximately 16 months, rather than 12 months, to build a network in the 15 complaint counties where it has D-SNP and MMP plans. This would not change the Court's analysis.

Humana contracts. See Tr. 2385:9–17 (Dr. Molina); but see Tr. 955:19–23 (Mr. Molina) (Molina is still interested in Aetna and Humana's provider contracts "to the extent they can be assigned"). This is a change from the approach that Aetna, Humana, and Molina earlier took, when the companies tried to assign Aetna and Humana contracts to Molina. See Tr. 379:5–380:8 (Cocozza) (Aetna originally planned to assign contracts to the divestiture buyer but no longer intends to after discovering a low percentage are assignable). The implication the defendants draw from the testimony about the length of time it takes to build a provider network, the lack of variability in provider rates, the straight-forward process for contract negotiation, and Dr. Molina's preference for creating new contracts is that Molina will have no trouble building a competitive provider network during the period the ASA applies.

Defendants' suggested conclusion, however, is undermined by their other arguments, and by contemporaneous emails sent by Molina executives. The evidence that provider rates in Medicare Advantage are closely tied to Original Medicare rates is relatively persuasive. But there is some evidence to the contrary. Defendants' expert on efficiencies presented evidence that Humana and Aetna sometimes receive dramatically different rates in contracts with providers. See Tr. 2917:19–2918:6 (Gokhale). While he used this evidence to argue that the merger would result in efficiencies because the merged entity could use the lower of the two contracts, here this evidence simply means that there are some substantial differences between rates in Medicare Advantage contracts. Moreover, according to Board of Directors' meeting minutes, Dr. Molina claimed that the acquisition "would provide additional negotiating leverage with respect to its provider contracts," although at trial he disclaimed this statement. Compare PX0103-268 with Tr. 2369:20–2370:3 (Dr. Molina). Mr. Molina made the same statement in an email exchange with a board member. PX0271-809. The government also presented evidence that some of Molina's

contracts include rates significantly above Original Medicare rates. See PX0708; Tr. 2470:16–2473:12 (Rubino) (Molina's contract with Hospital Corporation of America in Florida pays rates "considerably above" Original Medicare). It is unclear whether those numbers are outliers or indicate a systemic lack of bargaining power due to Molina's smaller size. But the primary problem with defendants' argument is that the conclusion that building provider networks is easy does not follow from the premise that negotiating provider rates is easy. There are significant non-rate terms in provider contracts—a fact that Molina, Aetna, and Humana executives highlighted elsewhere in their testimony.

Specifically, defendants repeatedly emphasize Molina's ability to provide sophisticated care management. See, e.g., Tr. 2231:25–2232:10, 2273:20–2275:19 (Dr. Molina). That requires, in part, engaging in value-based contracts with providers to align incentives for providers to manage their patients' care and overall health. See Tr. 2262:23–2263:11 (Dr. Molina); PX0412-735 (Aetna internal document stating that "ability to drive provider performance to improve revenue, quality and outcomes" is core driver of success). Dr. Molina emphasized Molina's strength in value-based contracting as a core reason why it would provide high quality care management to its Medicare Advantage members. Tr. 2216:11–22 (Dr. Molina). Other witnesses acknowledged that value-based contracts—the type that Molina believes important to success in this business—are significantly more difficult and time consuming to negotiate. See, e.g., Tr. 2521:7–14 (Buckingham). Cocozza testified that Aetna's scale and its history of "operat[ing] viable, successful Medicare Advantage plans" is important for negotiating value-based contracts with providers. Tr. 348:1–13 (Cocozza) (history of success); Cocozza Dep. 189:6–19, admitted at Tr. 344:25–345:8 (scale). Wheatley agreed, emphasizing that scale does matter in "get[ting] the providers' attention" to form a value-based contract. Tr. 543:11–544:4 (Wheatley). Thus, even if

rate negotiations are not that difficult in Medicare Advantage, the Court does not accept that forming provider contracts as a whole is not difficult. Indeed, Rubino herself at one time agreed: she stated in an email sent while Molina was putting together its final bid that successfully implementing the divestiture would be a "big fricken lift." PX0102-449; Tr. 2502:7–13 (Rubino).

Rubino's view is consistent with the evidence presented. Molina would have at most about a year, even if it extends the ASA to the maximum extent, to build a provider network before it would need to submit network information to CMS for adequacy review. It can take more than that—up to 18 months—to build a provider network in a new market, and can take even more time to build a value-based network. And without value-based networks, Molina will not be able to implement the care management that it believes is essential to success in Medicare Advantage. Based on all the evidence, then, the Court finds that Molina likely could not build a competitive Medicare Advantage provider network in all (or even most) of the 364 relevant counties in the timeframe available.

iii. Internal Capacity

Defendants argue that Molina has the internal capacity—including IT infrastructure, personnel who can manage star ratings, and management and staff with relevant expertise—to successfully operate the divestiture plans, based on its experience with Medicaid, dual plans, and the public exchanges. They emphasize that Molina has the internal IT capacity to manage shifting 290,000 members onto its platform. Molina is in the midst of a $50 million IT upgrade. Tr. 990:22–991:5 (Mr. Molina). Because the company is already processing claims for "9 or 10 million patients," in its own plans and in its role as the Medicaid claims processor for five states, "adding 300,000 Medicare patients is not a stretch." Tr. 2233:4–11 (Dr. Molina). And the period of the ASA—at most, just under two years—is sufficient to transfer those members onto Molina's

IT platform. Tr. 954:24–955:1 (Mr. Molina). In fact, Rubino believes it can be accomplished in three to four months. Tr. 2455:12–2457:11 (Rubino). The government countered that Molina underestimates the difficulty of IT integration. For example, Aetna and Coventry merged in 2013, and now Aetna intends to fully integrate those systems by January 2019—six years after the merger. See Tr. 386:12–19 (Cocozza); see also Tr. 381:10–382:3 (Cocozza).

Molina also emphasized that it has personnel with the necessary knowledge to manage star ratings. There are two ways in which star ratings could be important: higher star ratings might lead a senior to prefer a particular plan and might also affect the payments that MAOs receive from CMS (because they affect both benchmarks and rebates). The parties presented conflicting evidence as to whether star ratings really matter to seniors—with the companies presenting conflicting evidence themselves. Compare Tr. 1342:16–22 (Bertolini) ("all other things being equal" seniors will choose a plan with higher star ratings); with Tr. 2044:21–2045:4 (Kauffman) (Humana broker agreeing that she "cannot recall any senior expressing interest in star ratings"). But it is uncontroverted that star ratings matter for the latter purpose—increasing payments to an MAO. See Tr. 540:25–541:7 (Wheatley) (star ratings "absolutely impact [Humana's] ability to keep premiums and benefits stable"); PX0008-329 ("Aetna's star ratings are helping us to maintain our $0 premium Medicare Advantage plans as well as to preserve valuable supplemental benefits. . . . Through high star ratings, we are able to create and maintain solidly competitive MA plans."); PX0102-449 (Molina "at risk of not being able to honor current benefits" if star ratings of divested plans do not transfer over to Molina). Indeed, Molina even insisted on the option of withdrawing from the divestiture agreement if CMS does not permit the star ratings of the divested plans to transfer to Molina. DX0262-064 (APA § 6.02(e)); DX0264-064 (APA §6.02(e)); Tr. 986:22–987:3 (Mr. Molina) ("We put that in there because we wanted to protect the star ratings."); Tr.

2484:9–10 (Rubino) (Molina "repeatedly" requested that contract term). Molina now appears open to waiving this term. Tr. 987:4–13 (Mr. Molina); Tr. 2388:16–2389:9 (Dr. Molina)).

Aetna and Humana argue that Molina has experience managing star ratings because its D-SNPs are subject to the same system. One of Molina's D-SNPs has a 4 star rating; the rest have just 3.5 stars. Tr. 2358:9–15 (Dr. Molina); Tr. 978:5–8 (Mr. Molina). D-SNPs have, on average, half a star lower rating than comparable non-dual plans. Tr. 1166:5–1167:12 (Cavanaugh); see also Tr. 2269:15–20 (Dr. Molina). However, CMS already adjusts for this in the ratings assigned. Tr. 1167:7–12 (Cavanaugh). Molina has a division responsible for managing star ratings, which, it asserts, will be able to maintain high ratings on the divestiture Medicare Advantage plans. See DX0553-007 (Molina has a "Dedicated Unit" for "Quality and Star Ratings"); DX0134 (discussing Molina's "Member Engagement Program," which is "designed to improve overall member satisfaction and help increase quality measure scores"); Tr. 2270:15–20 (Dr. Molina); Tr. 2457:17–2458:21 (Rubino).

Defendants also contend that Molina has the necessary personnel and management expertise to be a successful competitor following this divestiture. Molina intends to hire 1,500–2000 more employees, including actuaries and employees with finance and Medicare experience. Tr. 991:24–992:14 (Mr. Molina). The company has hired a regional president with Medicare Advantage experience, and is filling other management-level positions. Tr. 2452:5–23 (Rubino). Molina emphasizes that the period of the ASA gives Molina an additional cushion of time to build its internal capacity as necessary. Tr. 2253:20–2254:7 (Dr. Molina).

But statements made by Molina board members and executives prior to litigation—at the time that Molina was considering the deal—undermine the in-court claims about Molina's capabilities. In a June 30, 2016, email, Dale Wolf—a Molina board member and former CEO and

CFO of Coventry—stated "this is a very different business from what we do, including commercial marketing, pricing, contracting, etc[.] Unless we can acquire some talent as part of the deal, I think we are woefully under-resourced to be able to take this on." PX0083; see Tr. 967:19–968:17 (Mr. Molina). Mr. Molina, the CFO, responded: "Agree wholeheartedly. Our medical management team (at Corporate) has a great deal of experience with" Medicare Advantage, but "I think our poor performance on our current SNP business provides ample evidence that we need to beef up Medicare resources." PX0083. On July 2, Richard Schapiro, another board member, listed several pros and cons of the deal, and stated "[w]e lack management with the requisite Medicare skills and the handful of people we have won't cut it." PX0084. Mr. Molina again responded: "I agree with you on all points" and "I would put more weight on the 'con'cerns." PX0084. The next day, another board member expressed a similar concern, stating "[t]he sales and marketing of MA is a really different process for us." PX0271-807. And in a particularly colorful exchange between Schapiro and Dr. Molina, Schapiro described the divestiture as follows: "The image that comes to my mind here is the dog chasing the car and we are the dog. What happens if we catch it?" PX0086. Dr. Molina responded "I guess it depends on if it is a mini Cooper or a Suburban." PX0086. Schapiro later stated that he and Wolf "both agree that we don't have the internal talent to run it." PX0086.

At trial, Mr. Molina and Dr. Molina explained that those emails only represent the preliminary thoughts of a handful of board members who ultimately voted in favor of the divestiture, and therefore the Court should look to the board's ultimate vote as evidence of a thorough decision-making process. See Tr. 963:1–12 (Mr. Molina); Tr. 2242:6–2243:23, 2246:16–2247:4 (Dr. Molina). Mr. Molina explained this his response to Wolf's email that he "[a]gree[s] wholeheartedly" does not represent his real views; rather, he was merely placating a

board member before explaining his disagreement. Tr. 968:18–24 (Mr. Molina). He also stated that he was incorrect in his statement that Molina's D-SNP plans are performing poorly. Tr. 969:23–972:10 (Mr. Molina). (But in fact, Molina's D-SNPs are not profitable, as Mr. Molina later testified at trial. Tr. 975:3–7 (Mr. Molina); see PX0106-077). Similarly, Mr. Molina described his apparent agreement with Schapiro on the pros and cons of the divestiture as not his true views, but just an attempt to softly disagree with a board member, rather than express his views more clearly. Tr. 976:22–977:10, 980:12–25 (Mr. Molina). Dr. Molina likewise explained his email exchange with Schapiro as merely "banter." Tr. 2247:13–20 (Dr. Molina). He further testified that while he did not say so in the email, he disagreed with the statement that Molina doesn't "have the internal talent" to manage the divestiture assets—in fact, he thinks the board was "ignorant of [Molina's] capabilities" because he had failed at "making sure they're better informed." Tr. 2251:17–2252:4 (Dr. Molina).

The Court is more persuaded by the contemporaneous email exchanges than by the in-court attempts to explain or disavow those documented exchanges. The totality of the evidence suggests that Molina is not likely to have the internal capacity—including IT, ability to manage star ratings, and necessary personnel and management—to successfully operate the divestiture plans so as to replace the competition lost by the merger. The emails are clear and blunt, and were made when the board, Dr. Molina, and Mr. Molina were deciding how to proceed. Although opinions can change and a single email is not determinative, taken as a whole these emails present a different view of Molina executives' assessment of the company's capacity to compete successfully than the view presented at trial. The explanations that Mr. Molina and Dr. Molina offered at trial—essentially, that they were not forthcoming in their communications with board members—are not credible. See Tr. 969:23–971:8 (Mr. Molina); Tr. 2251:17–2252:4 (Dr. Molina). And if those

explanations are true, then the Court would need to reject the fact that Molina's board ultimately approved the transaction because by Mr. Molina's and Dr. Molina's own admissions, the board was being misinformed by senior executives. The Court cannot simultaneously consider the board's ultimate approval of the transaction as evidence that Molina can compete successfully, yet disregard contemporaneous statements to the contrary.

Moreover, while the ASA gives Molina some time to build its internal capabilities (and its provider networks), the ASA does not remedy Molina's deficiencies. The Court will not rely too heavily on the ASA, because Aetna and Humana have no incentive to provide any assistance beyond the bare minimum during this period, lest they create too powerful a competitor. See Sysco, 113 F. Supp. 3d at 77; White Consol. Indus., 781 F.2d at 1228. And more importantly, the ASA only gives Molina time to build its own capacity—it does nothing to provide Molina with the resources it would need to do so.

In short, before even looking at Molina's internal emails, there are reasons to doubt that it has the internal capabilities needed to manage the divestiture plans. Molina executives and board members have the same concerns, at least when expressing their views candidly at the time. It seems more likely that Molina and its board moved forward with the divestiture because, for the price, it was low-risk and high-reward for the company, despite their belief that Molina was not well positioned to be an effective competitor.

iv. Brand, Marketing, and Brokers

Aetna and Humana argue that Molina will be able to retain many of the 290,000 members it acquires through the divestiture, and will be able to attract more members during the Annual Enrollment Period. The parties agree that Molina is not well-known in the Medicare Advantage space. Tr. 1350:3–9 (Bertolini); Tr. 2535:11–18 (Buckingham); Tr. 980:12–17 (Mr. Molina);

PX0271-809 ("I wonder how people will feel going from Aetna to a relatively unknown Molina in the [M]edicare space"). Defendants argue that brand name is often less important to retaining and attracting customers than network and plan benefits are. See Tr. 744:20–745:4 (Farley) (Humana able to compete successfully in markets where it did not have established brand); Tr. 2514:13–2515:7 (Buckingham) (same); Tr. 2436:16–21 (Rubino) (brand is only one factor seniors consider); see also DX0419 ¶ 179 (national brand not correlated with success in a particular county). Perhaps, but there is contrary evidence in the record as well. See Tr. 289:15–22 (Cocozza) (strong brand can compensate for other weaknesses); Tr. 794:25–795:12 (Farley) (Humana reputation strong enough to overcome $19 premium differential); Tr. 3340:4–3341:1 (Orszag); PX0271-809. Defendants also argue that to the extent brand matters, Molina knows how to build its brand recognition due to its experience doing so in the public exchanges. See Tr. 2208:15–21 (Dr. Molina); Tr. 2437:20–2438:17 (Rubino). Molina contends that although Medicaid does not have individual enrollment like Medicare Advantage does, Molina has sufficient experience in its D-SNP and exchange plans to understand how to market itself to individuals. See Tr. 2236:18–2237:9 (Dr. Molina); see also Tr. 1242:16–21 (Burns) (Medicaid beneficiaries are automatically enrolled); Tr. 1214:20–1215:5 (Cavanaugh) (MMP members automatically enrolled). Finally, Molina argues that it knows how to build a broker network based on its experience in the exchanges, and will be able to successfully do so in Medicare Advantage. Tr. 2424:12–15, 2427:12–23, 2397:5–9 (Rubino); Tr. 967:1–2 (Mr. Molina), see also DX0136; DX0137.

The Court concludes that brand is sometimes important to consumers and sometimes not, and that Molina does have some experience building its brand and finding brokers in new markets. Hence, the Court does not believe that lack of brand recognition, inexperience with marketing, and

lack of existing broker networks will be major barriers to Molina retaining and attracting new customers. However, based on all the evidence concerning Molina's ability to successfully operate the divestiture Medicare Advantage plans, the Court finds that Molina is not likely to be able to replace fully the competition lost by the merger. Two other types of evidence—the low purchase price and Molina's history in Medicare Advantage—also support this conclusion.

(b) The Purchase Price

The low purchase price raises concerns about whether Molina can be a successful competitor. There is no dispute that the price is extremely low. Dr. Molina testified that the usual purchase price for individual Medicare Advantage plans is $7,000–$10,000 per member, including statutory capital. Tr. 2250:9–14, 2251:8–13 (Dr. Molina). Mr. Molina wrote in an email that the usual price is $3,000–$5,000 per member, without statutory capital. See PX0100 ("Everyone acknowledges the bargain price paid- 400 per member vs normal px for these lives that seems to range from 3-5k"). Molina paid $1,400 per member with statutory capital, and $401 without. Tr. 2251:9–14 (Dr. Molina); DX0262-234; DX0264-230. Indeed, Dr. Molina believes he got a "screaming good price," as one of his board members described it. Tr. 2328:24–2329:6 (Dr. Molina); see also PX0100 (Mr. Molina describing it as a "bargain"). Defendants argue that the low price reflects the parties' relative bargaining power: Aetna and Humana needed to find a divestiture buyer, and Molina knew that. The government counters that it reflects the riskiness of the transaction, and makes Molina more able to abandon many plans, counties, and members (i.e., not adequately replace lost competition) while still making a profit given the modest outlay.

The Remedies Guide acknowledges this possibility. It warns against the scenario where a divestiture purchaser is willing to buy assets at a "fire sale" price. Remedies Guide at 9. An extremely low purchase price reveals the divergent interest between the divestiture purchaser and

the consumer: an inexpensive acquisition could still "produce something of value to the purchaser" even if it does not become a significant competitor and therefore would not "cure the competitive concerns." Id. The Remedies Guide accurately captures the Court's concern here. The emails sent by Molina executives and board members at the time of the divestiture agreement indicate their significant concerns with the viability of the divesture. They support the inference that the government urges the Court to draw from the low purchase price. Additional statements by Molina executives indicate that Molina might decide to withdraw from several of the divestiture counties in short order, and instead only compete in some—exactly as the Remedies Guide warns against. See, e.g., PX0090-195 ("[w]here there is low membership volume or potential we might reduce the county footprint"); Tr. 2493:8–2494:6 (Rubino) (confirming the same); Tr. 2403:16–2404:2 (Rubino) (Molina will focus on building network in 12 top-tier states, before 9 second-tier states); PX0241-460 (identifying "key states"); PX0248-445 (identifying states for "immediate action"). The low purchase price thus further supports the conclusion that Molina has serious doubts about its own ability to manage all the divestiture plans but is willing to try given the low risk to the company reflected in the bargain price. That does not give the Court confidence in Molina's ability to effectively replace the competition lost by the merger.

(c) Molina's History in the Individual Medicare Advantage Market

Molina's history in the individual Medicare Advantage market also raises concerns about its ability to successfully compete following the divestiture. Molina has repeatedly tried to enter the Medicare Advantage space but has not succeeded. Some of these efforts should have had the same advantages now submitted as reasons why Molina will succeed. For example, Molina began offering its individual Medicare Advantage plan in Utah in 2014, Tr. 2375:8–13 (Dr. Molina); PX707 at 1, where it had a Medicaid presence for 19 years and a D-SNP for 8 years, Tr. 2376:22–

2377:3 (Dr. Molina). Molina also launched this plan already having a relationship with a large provider, the University of Utah. PX707 at 1. But despite its existing brand presence, its relationship with a provider, its claimed care management knowledge, its capacity to build a strong provider network, and knowledge of marketing and brokers, the Utah plan has not been successful. It currently has just 400 members, and less than a 1% market share. Tr. 2380:17–2381:2 (Dr. Molina). Molina presents no explanation as to what would be different for the divestiture plans compared with the Utah plan. Much of the same is true for Molina's individual Medicare Advantage plan in California, where Molina is headquartered, which has not succeeded and is no longer offered in 2017. While past performance is not perfectly predictive of the future, the Court gives some weight to Molina's consistently unsuccessful attempts to enter Medicare Advantage, particularly since Molina's theories for why this attempt would be different have not been borne out elsewhere.

(d) Expert Testimony

Finally, the Court's conclusions are consistent with those of Dr. Burns, the government's expert on divestitures. He testified regarding when divestitures fail and when they succeed, and concluded that the Molina divestiture does not have the characteristics of a successful divestiture. See generally PX0559 (Burns Report); PX0560 (Burns Reply Report). In his view, a successful health insurer has "six engines": product development, sales and marketing, operations, member management, provider management, and care management. Tr. 1232:8–1233:8 (Burns). He testified that Molina did not have any of these, nor did the ASA provide it with them. Tr. 1238:21–1239:7 (Burns). Although the Court finds Burns' framework helpful in understanding the evidence regarding the divestiture, ultimately the Court does not give significant weight to his analysis. He acknowledged that he conducted very little analysis specific to Molina or to this divestiture

agreement. See Tr. 1282:8–1283:18, 1285:17–1286:14 (Burns). Thus, while his framework is useful, for the most part his conclusions regarding Molina are not. Still, the Court's conclusions, and the factors it has considered, are consistent with his analysis.

5. Summary

In sum, the Court finds that the divestiture would not "restore [the] competition" lost by the proposed merger. See Sysco, 113 F. Supp. 3d at 72; Remedies Guide at 1. Molina has demonstrated that the divestiture is likely enough for the Court to consider whether it would counteract the anticompetitive effects of the merger. But the evidence does not show that it would.

Molina is primarily a Medicaid company. Although it has substantial experience serving the Medicaid population, the Court concludes that this experience will not transfer so as to enable it to be a successful competitor in the individual Medicare Advantage market. In particular, the Court finds persuasive the evidence that Molina would struggle to put together a competitive provider network in the available time frame. It would be especially difficult for Molina to create a value-based provider network—and Molina cannot effectively implement its care management capabilities without a value-based network. Internal Molina emails reveal the board, CFO, and CEO all doubted Molina's ability to successfully operate the divestiture plans. That, combined with the extremely low purchase price, raises genuine concern about Molina's prospects for broad success in the Medicare Advantage market. Finally, Molina's history of unsuccessful attempts to expand into Medicare Advantage is telling, given that Molina has presented little explanation for why a different result is likely now. Ultimately, then, the Court concludes that the proposed divestiture would not ameliorate the anticompetitive effects of the merger.

F. Conclusion Regarding Medicare Advantage

The government has established the existence of a product market for the sale of individual Medicare Advantage plans. When viewed within that market, and based on its significant HHI scores, the Aetna-Humana merger is presumptively unlawful in all 364 complaint counties. In further support of that presumption, there is clear evidence that the proposed merger would eliminate valuable head-to-head competition between two close rivals, one of which (Aetna) has been particularly aggressive in recent years. All of this evidence establishes that the merger is likely to substantially lessen competition. The companies' rebuttal arguments are unpersuasive, whether assessed individually or altogether. Government regulation of Medicare Advantage does not preclude, or even substantially diminish, the likelihood of competitive harm. And neither entry by new competitors nor the proposed divestiture to Molina are likely to replace the competition eliminated by the merger. For all these reasons, the Court concludes that the merger of Aetna and Humana is likely to substantially lessen competition for the sale of individual Medicare Advantage plans in the 364 complaint counties in violation of section 7.

II. The Public Exchanges

The government alleges that the effect of the merger between Aetna and Humana "may be to substantially lessen competition" in the public exchange markets in 17 counties in Florida, Georgia, and Missouri. 15 U.S.C. § 18; see Compl.¶ 47. The wrinkle here is that shortly after the complaint was filed, Aetna announced that it would no longer offer on-exchange plans for 2017 in any of those 17 counties. As discussed below, the parties vociferously disagree both as to why Aetna withdrew, and as to the legal implications of that decision. The market definition in this portion of the case is undisputed: each county is a separate geographic market, and on-exchange health plans is the relevant product market. But that's where the agreement ends.

This section first discusses the difference between actual competition (the standard framework for analyzing antitrust claims) and potential competition (a never-embraced theory for antitrust liability), and concludes that the standard method of antitrust analysis is appropriate here. After a discussion of the legal implications of Aetna's reasons for withdrawing from the 17 counties, the Court assesses the evidence in order to answer the ultimate question whether the merger may substantially lessen competition in those markets. For the merger to lessen competition, there must be competition to begin with. The Court finds that Aetna withdrew from the 17 counties to improve its litigation position. The Court further finds that Aetna is likely to compete in the public exchanges in only the three complaint counties in Florida after 2017, and that the merger may substantially lessen competition in those three counties.

A. Legal Framework

1. Actual Competition Versus Potential Competition

The government argues that because Aetna decided not to offer plans on the exchanges in the 17 complaint counties for 2017 for the purpose of evading antitrust review of the proposed merger, the Court should act as if Aetna had not taken this action. Instead, the government proposes, the Court should look to the state of competition as it existed in 2016—when Aetna and Humana competed in all 17 counties—and project forward from there. It relies on a line of cases beginning with United States v. General Dynamics Corp., 415 U.S. 486, 504–05 (1974), that explain that a company's post-merger behavior—specifically, decisions not to engage in anticompetitive activities while under government scrutiny—is a weak predictor of whether it will engage in anticompetitive actions in the future. This is for the "obvious" reason that companies could "stave off [enforcement] actions merely by refraining from aggressive or anticompetitive behavior when such a suit was threatened or pending." Gen. Dynamics, 415 U.S. at 504–05.

The companies, in contrast, argue that regardless of why Aetna chose not to offer plans on the exchanges in the 17 complaint counties in 2017, once the decision was made, that was the ball game.[36] They rely on the observation in International Shoe Co. v. FTC, 280 U.S. 291, 298 (1930), that an "acquisition will not produce the forbidden result if there be no pre-existing substantial competition to be affected." Int'l Shoe, 280 U.S. at 298. Rather, they argue, because Aetna is not offering plans on-exchange in 2017, the only possible lens through which the government could prove antitrust liability is the theory of "actual potential competition." See Defs.' Proposed Findings & Conclusions at 161. "Potential competition" is two separate theories: "perceived potential competition" and "actual potential competition." United States v. Marine Bancorp., 418 U.S. 602, 623–625 (1974); see also Lewis A. Kaplan, Potential Competition and Section 7 of the Clayton Act, 25 Antitrust Bull. 297, 298–99 (1980) (explaining doctrines). The perceived potential competition theory posits that if market participants believe that a firm outside of the market is likely to enter, that perception can have a procompetitive effect on the market (whether or not that firm is actually likely to enter). See Marine Bancorp., 418 U.S. at 624–25; United States v. Falstaff Brewing Corp., 410 U.S. 526, 537 (1973) (adopting doctrine). Thus, if the outside firm merges with a market participant, the elimination of that threat of entry can substantially lessen competition. Marine Bancorp., 418 U.S. at 624–25. The actual potential competition theory asserts that a merger of a firm outside of the market with a firm inside of the market can substantially lessen competition if the outside firm would have entered the market anyway absent the merger. Id. at 625. Whether actual potential competition is a viable theory of section 7 liability has not been answered by the Supreme Court. Id.; see also Kaplan, supra, at 300–01. Indeed, the companies contend that it is a discredited legal theory, and thus the necessary implication of

[36] The companies, of course, also contend that Aetna's decision was not made to improve its ligation position.

adopting that framework here would be that the government's case fails. See Defs.' Proposed Findings & Conclusions at 161. Additionally, the companies argue that General Dynamics and its progeny are inapplicable because those cases are concerned with post-merger conduct, whereas the conduct here is pre-merger. Id. at 152–57.

Neither side's analysis of the law is completely persuasive. Luckily, the case law itself provides clearer guidance. The core question remains whether the proposed merger may substantially lessen competition. See 15 U.S.C. § 18. Antitrust law is concerned with a "company's future ability to compete," Gen. Dynamics, 415 U.S. at 501, and deals in "probabilities, not certainties," Brown Shoe, 370 U.S. at 323. While there can be no substantial lessening of competition if there is no pre-existing competition to begin with, see Int'l Shoe, 280 U.S. at 298, the case law does not support defendants' approach of viewing competition as an on-off switch where a merging party can simply switch it off entirely by withdrawing from a market (potentially temporarily). Rather, courts routinely view competitors that may have one foot in and one foot out of the market as actual competitors, and evaluate the anticompetitive effects of a merger using the standard tools of antitrust analysis. Supreme Court cases discussing the "actual potential competition" doctrine describe a situation wholly unlike the one present here, and thus are not the appropriate framework for evaluating this case.

Other courts, including the Supreme Court, have viewed competitors who were marginally in the market as "actual competitors." This line of cases begins with United States v. El Paso Natural Gas Co., 376 U.S. 651 (1964). There, El Paso purchased Pacific Northwest Pipeline Corporation. Id. at 652–53. In simplified terms, El Paso had a contract with the primary gas distributor for Southern California, effectively blocking Pacific Northwest out of the market. Id. at 654–55. But Pacific Northwest had competed for that contract (unsuccessfully), and had made

other efforts to break into the California market in the past. Id. The Court analyzed El Paso's acquisition of Pacific Northwest as a merger between actual competitors, rather than a merger between one competitor and one potential competitor. Id. at 659–662; see also Marine Bancorp., 418 U.S. at 623 (stating that El Paso was an actual competitor, not potential competitor, case).

Two other cases from courts of appeals are instructive. In Polypore International, Inc. v. FTC, 686 F.3d 1208 (11th Cir. 2012), the Eleventh Circuit considered whether a battery parts manufacturer (Microporous) was in the automotive battery market, or only in the motive battery market (motive batteries are used in industrial machinery). Polypore Int'l, 686 F.3d at 1211. Microporous had made numerous attempts to enter the automotive battery parts market in recent years, including beginning contract negotiations with one buyer and entering a memorandum of understanding with another. Id. at 1212. But at the time that Microporous was acquired by Polypore, it was not actually selling any products in the automotive battery market. Id. at 1211. The court rejected Polypore's argument that Microporous should be analyzed as a potential competitor, not an actual competitor. Id. at 1213–16. It explained that, as in El Paso, although the "acquired company had not actually sold [any products] in the market," section 7 is "concerned with probabilities, not certainties." Id. at 1214. Moreover, Microporous was already selling a similar product in the motive battery market, and had taken actions to try to shift that product line into the automotive battery market for the future—indicating that it was actually a competitor in the automotive battery market despite not yet making any sales in that market. Id. at 1214–15.

The Ninth Circuit reached a similar conclusion in a case that has some echoes of this one. In FTC v. Warner Communications, Inc., 742 F.2d 1156 (9th Cir. 1984), Warner, the parent company of three record labels, proposed a joint venture and partial merger with Polygram Records, a smaller record company. Id. at 1159. Polygram argued that it "intend[ed] to leave the

distribution market due to economic necessity,"[37] and thus the merger could not have an anticompetitive effect. Id. at 1164. The court rejected this theory, holding "that a company's stated intention to leave the market . . . does not in itself justify a merger." Id. at 1165.

The companies' favored line of authority involves entirely different scenarios. They urge this Court to apply Marine Bancorporation and Falstaff Brewing instead. These cases discuss the potential competition theory of antitrust liability.

Aetna and Humana argue that the actual potential competition theory is the only legitimate lens through which to analyze the government's case. But that ignores the facts of the two Supreme Court cases discussing the doctrine and how far distant they are from the scenario at hand. In Marine Bancorporation, the Supreme Court considered Marine, a bank with locations in the Seattle area, that proposed acquiring Washington Trust Bank, a bank with locations only in the Spokane area. Marine Bancorp., 418 U.S. at 606–07. Marine never had any locations near Spokane, had never attempted to enter the Spokane market, had no plans to do so, and under state law, it would have been nearly impossible for it to enter the Spokane market de novo. Id. at 624–639. Hence, the Court held that even assuming the actual potential competition doctrine is valid, there was no section 7 violation. Id. at 639.

Falstaff Brewing primarily concerned perceived potential entry, which is not at issue here. See Defs.' Proposed Findings & Conclusions at 161 (specifying "actual potential competition theory"). In that case, Falstaff, a beer brewing company with a presence across the nation but not in New England, acquired Narraganset, a local New England brewery. Falstaff Brewing, 410 U.S. at 527–29. The district court found that Falstaff had decided not to enter the market de novo regardless of the acquisition. Id. at 530–31. It did not consider the government's perceived

[37] Polygram was not asserting the "failing company" defense, which is an affirmative defense to a section 7 violation. Id. at 1164 (citing Int'l Shoe, 280 U.S. at 302).

potential entrant theory. Id. at 532–33. The Supreme Court explicitly did not reach the question whether the actual potential competition theory is valid, but instead remanded for the district court to consider the perceived potential competition theory. Id. at 537–38.

The facts here are unquestionably much closer to those in El Paso, Polypore, and Warner, than to those in Marine Bancorporation and Falstaff Brewing. None of the cases are on all fours with this one—indeed, it is hard to imagine there could be such a case given the idiosyncrasies of the health insurance market—but El Paso and its ilk are closer in relevant ways. Here, like Polygram's past participation in the market in Warner, Aetna offered health insurance plans in all 17 of the challenged markets in 2016 and before. Like Microporous in Polypore, Aetna continues to offer very similar products in adjacent markets—both geographically nearby (plans on other public exchanges) and conceptually nearby (off-exchange plans in all 17 counties, see Tr. 1465:12–15 (Kelmar)). And similar to Pacific Northwest in El Paso, there are indications that Aetna will once again attempt to compete in the challenged markets in the near future. It is undisputed that Aetna could compete in those markets after 2017, see Tr. 1541:7–16 (Mayhew), and that at the time the merger agreement was entered and the complaint was filed, Aetna planned on competing in those markets in 2017 and subsequent years, see PX0112 at 10.

This case is wholly unlike the facts described in Marine Bancorporation, where state laws blocked Marine from competing in the market of the firm it sought to acquire. Moreover, neither Marine nor Falstaff ever had a market presence in the relevant geographic market—the reason for their respective acquisitions was to expand into a new geographic market—which is just the opposite of Aetna and Humana, which both had a market presence in the 17 counties through 2016.

Regardless of why Aetna withdrew from the public exchanges in the 17 counties, then, this case is closer to El Paso than to Marine Bancorporation and Falstaff Brewing.[38] The Court will therefore employ the standard tools of section 7 analysis to ascertain the effects of the proposed merger on future competition, and determine whether the proposed merger will substantially lessen competition in the challenged markets. See Baker Hughes, 908 F.2d at 988 ("[p]redicting future competitive conditions . . . calls for comprehensive inquiry").

Where the government has alleged that Aetna acted intentionally in order to evade judicial review, it would be especially inappropriate to apply a legal framework that would limit judicial inquiry. Courts appropriately guard their ability to ascertain the actual facts at issue, rather than allow a party to thwart judicial review through its own machinations. See, e.g., United States v. W.T. Grant Co., 345 U.S. 629, 632 (1953) ("voluntary cessation of allegedly illegal conduct does not deprive the tribunal of power to hear and determine the case" because "courts have rightly refused to grant defendants such a powerful weapon against public law enforcement"); United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290, 309 (1897) ("The defendants cannot foreclose [the public's] rights [under the Sherman Act] by any such action as has been taken in this case."). Employing only the lens of the actual potential competition theory here would prevent the Court from undertaking its obligation to conduct a close analysis of the effects of the proposed merger on future competition. That would create incentives for firms to take similar actions in the future to evade antitrust review. This, then, is an independent reason not to adopt the companies' view that the only relevant legal framework is one of actual potential competition.

2. Whether Aetna's Reasons for Withdrawal Matter

[38] The Court expresses no opinion on whether actual potential competition is a viable antitrust theory.

Once the Court's analysis is guided by the El Paso line of cases, the framework for how to evaluate the implications of Aetna's reasons for its withdrawal from the exchanges for 2017 becomes clearer. The ultimate question is whether the merger may substantially lessen competition on the public exchanges in the 17 counties. Again, for competition to be lessened, there must necessarily be competition to begin with. See Int'l Shoe, 280 U.S. at 298. Thus, there can be no lessening of competition for 2017. The Court will not adopt the government's proposed approach of simply ignoring the reality that Aetna is not offering plans for 2017 in the relevant markets, and pretend that the facts are frozen as they were in 2016.

But the Court is not limited to looking just at 2017. Analyzing the anticompetitive effects of the proposed merger necessarily "focus[es] on the future." See Baker Hughes, 908 F.2d at 991. None of the cases cited by either party indicate that the analysis is limited to one year. Indeed, no case identifies a specific timeframe at all, and even the defendants do not argue that the Court is limited to considering only one year. While predictions too far in the future risk becoming mere "ephemeral possibilities," Falstaff, 410 U.S. at 563, an assessment that only looks at one year fails to determine "the probable effect of the merger upon the future as well as the present which the Clayton Act commands the courts . . . to examine," Brown Shoe, 370 U.S. at 333. Rather, the proper timeframe for evaluating the effects of the merger on future competition must be "functionally viewed, in the context of its particular industry." See Brown Shoe, 370 U.S. at 321–22. In the health insurance industry, firms routinely plan more than one year out, and the evidence the Court heard about a firm's future behavior and the competitive effects of that behavior applies not just to the following year. See, e.g., PX0324 ("Vision 2020," Aetna's five-year plan including Humana acquisition). While the Court need not specify the exact time frame for considering the

competitive effects of the proposed merger, it must look at 2018, 2019, and 2020 because the firms make business decisions and projections over that time frame.

The question then becomes whether Aetna will compete in the 17 counties after 2017, and whether the merger will substantially lessen that competition. "Predicting future competitive conditions in a given market, as the statute and precedents require, calls for a comprehensive inquiry." Baker Hughes, 908 F.2d at 988. One piece of evidence is the fact that Aetna chose not to compete in the 17 complaint counties in 2017. If that decision was made for sound business reasons, the Court might consider it to be powerful evidence that Aetna would not compete in those markets in 2018 and beyond. But if that decision was made to improve Aetna's litigation position, then it would be weak evidence of Aetna's likely future conduct. The Supreme Court has recognized this simple proposition. See Gen. Dynamics, 415 U.S. at 504–05. Lower courts have as well, and have expanded it to include evidence that "could arguably be subject to manipulation." See Chicago Bridge & Iron Co. v. FTC, 534 F.3d 410, 435 (5th Cir. 2008) (some emphasis omitted); Hosp. Corp. of Am. v. FTC, 807 F.2d 1381, 1384 (7th Cir. 1986) ("We agree with the Commission that it was not required to take account of a post-acquisition transaction that may have been made to improve [defendant's] litigating position."); see also United States v. Bazaarvoice, Inc., No. 13-cv-00133-WHO, 2014 WL 203966, at *73 (N.D. Cal. Jan. 8, 2014).[39] The companies argue that these cases are inapposite because they concern a firm's actions post-

[39] The parties spend significant pages arguing about the import of FTC v. Libbey, Inc., 211 F. Supp. 2d 34 (D.D.C. 2002). That case is only marginally relevant. In Libbey, the merging parties revised their agreement after the FTC decided to seek an injunction to identify a proposed divestiture in an attempt to alleviate some of the FTC's concerns. 211 F. Supp. 2d at 42 n.21. The court noted that the revisions were not an attempt "to evade FTC and judicial review," but rather to alleviate anticompetitive effects of the merger. Id. at 46. Like the proposed divestiture to Molina in this case, the parties' there attempted to alleviate the anticompetitive effects of the merger through a divestiture, and that proposed divestiture was then reviewed by the court. The Libbey court likewise noted that some parties might revise an agreement in an "unscrupulous[] attempt to avoid judicial review and FTC review," but did not discuss how it would approach that problem given that it did not arise. See id. at 46 n.27. Thus, Libbey provides little guidance concerning the proper approach here.

merger, rather than after merger was agreed to but before it was consummated, as is the case here. That is a distinction without a difference. These cases embody the common-sense proposition that a firm's behavior undertaken with the aim of persuading a court or the government regarding the legality of a merger may not be predictive of how that firm will behave once the court or the government are no longer engaged. This holds true whether the actions in question are after the merger was announced or after it was consummated.[40]

Thus, the Court considers the fact that Aetna is not offering plans in the 17 complaint counties in 2017 as one piece of evidence about whether Aetna will offer plans in the 17 complaint counties in 2018 and beyond. The Court will give that evidence the weight it deserves—less if Aetna withdrew for the purpose of improving its litigation position; more if Aetna withdrew for sound business reasons. Ultimately, if the Court finds that Aetna is likely to offer plans on the exchanges in any of the 17 complaint counties in 2018 and later, then the Court will assess whether the merger would substantially lessen competition in any of those counties.

B. Analysis

1. Aetna Withdrew From the Complaint Counties to Improve its Litigation Position

Based on the facts presented at trial, the Court finds that Aetna withdrew from the 17 complaint counties for 2017 at least in part for the purpose of improving its litigation position. There is significant evidence—primarily in the form of contemporaneous emails among senior Aetna executives—that Aetna thought of the 17 complaint counties as one unit, and that it withdrew from those 17 counties to improve its position in this lawsuit. The companies presented

[40] The Hart-Scott-Rodino Act of 1976, 15 U.S.C. § 18a, requires firms to alert the Department of Justice and the FTC before certain mergers are consummated, and allow time for the government to conduct an investigation and seek an injunction pre-consummation. See Bazaarvoice, 2014 WL 203966, at *75 (explaining effect of Act). Pre- and post-merger suits are routinely analyzed identically. See, e.g., Baker Hughes, 908 F.2d at 987 (relying on pre- and post-merger cases); H&R Block, 833 F. Supp. 2d at 51–52.

evidence of how unprofitable the public exchanges around the country were, and argued that Aetna withdrew as a business decision. But while that evidence tends to show that Aetna had good business reasons for reducing its exchange footprint across the country, it does not show that Aetna withdrew from these specific counties for business reasons.

A review of the timeline is a helpful place to start. The key dates to keep in mind are July 21, 2016, when the complaint was filed, and August 15, 2016, when Aetna announced that it would not be offering on-exchange plans for 2017 in 11 of the 15 states where it had participated during 2016. Prior to filing the complaint, DOJ conducted an investigation. During that time, Aetna executives had multiple meetings with both DOJ and HHS, where Aetna connected this lawsuit with its future participation in the exchanges. Also prior to the complaint being filed, starting on July 9, 2016, a team of senior Aetna executives was considering Aetna's future participation in the exchanges across the country. It is the internal documents and emails that this team produced that are ultimately the most illuminating.

(a) Public Exchange Participation as Connected to the Merger

Aetna and its CEO, Mark Bertolini, have long been supporters of the public exchanges. Tr. 1350:13–19, Tr. 1386:21–1387:5 (Bertolini). Bertolini believes that "every American should be insured," and that doing so through the exchanges is a good business opportunity. Tr. 1387:4–5, 1351:1–22 (Berolini); PX0112 at 4 (Aetna Q1 2016 earnings call); PX0162 at 6 (Aetna Q3 2015 earnings call). He has consistently expressed a desire for Aetna to "have a seat at the table" and to help ensure everyone is covered. Tr. 1473:15–19 (Kelmar); Tr. 1387:4–13, 1390:9–12 (Bertolini).

During the investigation but before the complaint was filed, Aetna tried to leverage its participation in the exchanges for favorable treatment from DOJ regarding the proposed merger.

On May 11, 2016, Bertolini was deposed in DOJ's investigation. At that deposition, Aetna's counsel stated that if Aetna was not "happy" with the results of an upcoming meeting regarding the merger, "we're just going to pull out of all the exchanges." Tr. 1353:6–10 (Bertolini). Bertolini affirmed his counsel, stating "Nice." Tr. 1353:15–18 (Bertolini). The next day, Bertolini, Steven Kelmar (Aetna's Executive VP and Bertolini's Chief of Staff) and HHS Secretary Sylvia Burwell (among others) had a meeting. There, Kelmar told Secretary Burwell that if the merger was blocked, Aetna "would likely have to revisit its plans for and presence on the public exchanges." Tr. 1354:2–6 (Bertolini); Tr. 1453:12–23 (Kelmar); PX0134 at 7 (Aetna's third response to interrogatories). In a phone call on June 15, 2016, Bertolini told Secretary Burwell "if, by chance, you get a reach-out from the DOJ about us as a candidate for this merger, I would appreciate a good word for all that we've done with you." Tr. 1356:21–23 (Bertolini); see also PX0134 at 7. In preparation for that call, Kelmar sent Bertolini talking points that drew the connection between Aetna's participation in the exchanges and the merger more explicitly, stating: "By getting this deal done, I can make the commitment that we will expand our exchange footprint and continue to take a leadership position on expanding the value of exchanges to a greater part of the population," and, conversely, "[i]f we can't get to a good path forward on this deal the break-up fee of 1 billion dollars will significantly impact our business model and have some very tough consequences for us and the market." PX0113; Tr. 1454:18–1456:2 (Kelmar).

Ultimately, Bertolini expressed this sentiment in a July 5, 2016, letter to DOJ (and forwarded to Secretary Burwell) where he stated: "if the DOJ sues to enjoin the transaction, we will immediately take action to reduce our 2017 exchange footprint"; "we would also withdraw from at least five additional states"; and if the merger is blocked, "we believe it is very likely that we would need to leave the public exchange business entirely." PX0117 at 2; Tr. 1357:19–

1358:24, Tr. 1359:20–1360:1 (Bertolini); PX0118. Bertolini expressed a similar sentiment in a later email with Ron Williams, the former CEO of Aetna, after the complaint was filed, where he wrote that "the administration has a very short memory, absolutely no loyalty and a very thin skin." PX0131; Tr. 1365:22–1366:1 (Bertolini). When asked during his deposition what he meant by that, Bertolini explained that "it was about my involvement in helping them get the Affordable Care Act structured and properly done. And so that was our feeling was that we were doing good things for the administration and the administration is suing us." Bertolini Oct. 11, 2016 Dep. 127:20–128:6, admitted at Tr. 1367:9–15 (Bertolini).

This evidence shows that Aetna and its CEO, Bertolini, viewed participation on the exchanges as closely connected to DOJ's attempt to block the merger. Bertolini believed that DOJ should not block the merger in view of Aetna's role in advancing the ACA and participating in the exchanges, and Aetna was willing to offer to expand its participation in the exchanges if DOJ did not block the merger, or conversely, was willing to threaten to limit its participation in the exchanges if DOJ did. This is persuasive evidence that when Aetna later withdrew from the 17 counties, it did not do so for business reasons, but instead to follow through on the threat that it made earlier. But the most persuasive evidence is yet to come—internal Aetna documents and emails showing the factors that went into its decision-making process.

(b) Aetna's Decision-Making Process

Starting in early July, Bertolini convened a team of senior executives to evaluate Aetna's participation in the exchanges. Tr. 1360:17–22, 1362:5–1363:17 (Bertolini). This was prompted by information that Bertolini received on July 9 that Aetna had suffered large second quarter losses in its public exchange business. Tr. 1362:5–25 (Bertolini). The team included Karen Lynch, Aetna's President, Sean Guertin, Aetna's CFO, Jonathan Mayhew, the head of Aetna's exchange

business, Fran Soistman, Aetna's Executive Vice President and head of government services, Kelmar, and Tom Sabatino, Aetna's General Counsel. Tr. 1363:1–17 (Bertolini); Tr. 1476:13–1477:6 (Lynch). This team ultimately put together a set of recommendations regarding how to reduce Aetna's exchange footprint that Bertolini approved without alteration in mid-August. Tr. 1449:21–1450:8 (Bertolini); Tr. 1473:23–1474:1 (Kelmar); Tr. 1497:19–24 (Lynch).

The day the complaint was filed, Aetna employees were instructed to gather information regarding the 17 complaint counties. PX0220-290. The team evaluating Aetna's exchange participation jumped into action as well. The following day, Soistman wrote in an email: "By the way, all bets are off on Florida and every other state given the DOJ rejected our transaction." PX0121-106. Later, he wrote to Kelmar: "I also need to share with you what I've learned about the 17 counties in the DOJ's complaint. We have a very narrow window of opportunity to affect changes in footprint particular with the off exchange business." PX0122-638. Soistman forwarded that email to Lynch saying: "I need to share with you what I learned during my meeting. Did not want to involve you officially as it may get ugly." PX0122-638. The following day, July 23, Kelmar asked Soistman: "Do the counties in the suit overlap with Humana's recent announcement of withdraw [sic]?" PX0124-626. When Soistman responded that "Humana remains in all 17 counties," Kelmar wrote: "Then that makes it easy we need to withdraw from those." PX0124-626[41]; Tr. 1460:10–1461:6 (Kelmar). At the same time, Kelmar told Lynch: "Most of this is a business decision except where DOJ has been explicit about the exchange markets. There we have no choice." PX0125; Tr.1462:4–13 (Kelmar). Lynch responded: "Agree." PX0125.

[41] On July 21, 2016, Humana announced that it would only offer on-exchange plans for 2017 in 11 states, rather than the 15 where it offered on-exchange plans in 2016. Humana's announcement did not affect any of the counties identified in the complaint, and there is no allegation that Humana's decision was related to this litigation.

The following day, the team took steps to update their recommendations to include the 17 complaint counties, without a business analysis of the exchanges in those locations. Mayhew sent Lynch a draft document entitled (in part) "Strategic Options for 2017 Footprint." PX0126 at 4; PX0127; Tr. 1481:9–1483:1 (Lynch); Tr. 1505:15–22 (Mayhew). Lynch responded, asking: "Does this include the 17 places in the DOJ complaint[?]" PX0127; Tr. 1483:2–11 (Lynch).

In response, Mayhew began what would become a series of emails where Aetna executives tried to conceal from discovery in this litigation the reasoning behind their recommendation to withdraw from the 17 complaint counties. Mayhew explained: "I was told to be careful about putting any of that in writing. I will have the attorney client privilege ccd by tomorrow." PX0127. Mayhew acknowledged at trial that he was told to include the reference to attorney-client privilege so as to prevent these documents from being produced in this litigation. Tr. 1508:3–7 (Mayhew). He agreed that the purpose of shielding these documents was to conceal how Aetna was handling the decisions about its exchange footprint. See Tr. 1509:7–11 (Mayhew). Lynch also relayed to Soistman the same concern. She told Soistman that bcc'ing her on an email "doesn't protect" the document because "it shows on the scan," which she explained referred to the scan "they do for discovery." PX0122-638; Tr. 1489:24–1491:24 (Lynch).[42] Mayhew acknowledged Aetna executives instructed each other to call, rather than email, to avoid creating a written trail that could be revealed in discovery. Tr. 1509:7–11 (Mayhew); PX0122-638 ("Best we talk live."); PX0124 ("Can you take another quick call?").

Despite these efforts, relevant documents were revealed in discovery. On Sunday, July 24—after conferring with Soistman, Kelmar, and Lynch—Mayhew instructed his team to update

[42] At trial, Lynch explained that this statement expressed her concern that Aetna should be transparent in its decision-making process, rather than reflecting an attempt to shield its decision-making process from discovery. Tr. 1491:23–24 (Lynch). The Court does not credit this explanation.

the document reflecting options for Aetna's exchange footprint with the 17 counties. PX0128-987; Tr. 1509:12–1511:18 (Mayhew). The newly updated document not only recommended exiting all 17 complaint counties, but also broke them out as a separate bullet point, rather than including the counties (or states) in a list with others that the team recommended exiting. See PX0129-243 (stating "Exit targeted service areas (17 counties in total; 3 states)"). A document from August 2, 2016 reflected this same difference in how the 17 counties were treated, compared with how every other geographic market was treated. In this summary spreadsheet describing one potential scenario for Aetna's exchange footprint moving forward, a series of states and regions are listed, followed by one entry for "17 Counties." PX0130 at 4.

Other documents and testimony also indicate that the team of executives did not evaluate the profitability of the 17 counties in the same manner as it did for the other states from which Aetna was considering withdrawing. Lynch testified that the team never assessed the profitability of Aetna's individual business in the 17 complaint counties. Tr. 1498:1–9 (Lynch). Had they done so, they would have seen that Aetna chose to withdraw from some profitable states and stay in some unprofitable ones. See DX0009-002. Aetna chose to remain on-exchange in Delaware, Iowa, Nebraska and Virginia—all projected to be unprofitable for 2016—yet withdrew from Florida, which is projected to be profitable on-exchange. DX0009-002. In fact, Florida is projected to be unprofitable off-exchange, and only profitable overall because of the strength of its on-exchange business. DX0009-002; Tr. 2758:6–2759:1 (Guertin). Florida was Aetna's third most profitable state for its on-exchange business in 2015 and the first half of 2016. Tr. 2756:14–2757:18 (Guertin); DX0009-002. (Both Missouri and Georgia were projected to be unprofitable for 2016, on-exchange and overall. DX0009-002). Ultimately, the team recommended to Bertolini

that Aetna withdraw from Florida, Georgia, Missouri, and eight other states.[43] Tr. 1497:12–18 (Lynch). Bertolini adopted this recommendation without change. Tr. 1449:21–1450:8 (Bertolini).

The inescapable conclusion from these contemporaneous emails and documents is that the Aetna team making recommendations to Bertolini did not view withdrawing from the 17 complaint counties as a business decision. Rather, it saw the other potential withdrawal states as business decisions, but there was "no choice" about these 17 counties. The emails between Soistman, Mayhew, Kelmar, and Lynch demonstrate that each of them viewed the 17 counties as a separate bloc from the other locations under consideration. The documents regarding the recommendation to Bertolini reflect the same dichotomy between the 17 complaint counties (included for non-business reasons) and the other states (included for business reasons). Lynch's admission that the team did not consider the profitability of those counties strongly supports the inference that Aetna withdrew from them for litigation-related reasons. And for the Florida on-exchange markets, the underlying data regarding profitability supports this inference as well. Moreover, although seeking advice of counsel and protecting documents under the attorney-client privilege does not by itself indicate malfeasance, repeated efforts to conceal a paper trail about this decision-making process (rather than to actually seek legal guidance) do give rise to such an inference. Collectively, then, the evidence provides persuasive support for the conclusion that Aetna withdrew from the on-exchange markets in the 17 complaint counties to improve its litigation position. The Court does not credit the minimal efforts of Aetna executives to claim otherwise.

(c) The Florida Market President's Reaction

The reaction of Christopher Ciano, Aetna's Florida Market President—who was not involved in the decision—demonstrates how far outside of normal business practice this decision

[43] Due to time constraints, Aetna believed that if it wanted to withdraw from those 17 counties, it needed to withdraw from those three states entirely, and so, the team recommended it do so. Tr. 1518:12–1519:2 (Mayhew).

was. He wrote to Mayhew on August 4: "Really disappointed we are pulling the plug on Florida." PX0132-565. Ciano followed up with "I just can't make sense out of the Florida decision . . . Never thought we would pull the plug all together. Based on the latest run rate data . . . we are making money from the on-exchange business. Was Florida's performance ever debated?" PX0132-565. Mayhew responded with a request to discuss via phone "instead of email." PX0132-565. As Mayhew explained in court, these requests for phone calls were an attempt to avoid leaving a paper trail. Tr. 1509:7–11, 1508:3–7 (Mayhew). Ciano's reaction to Aetna's decision underscores that it was not a business decision. He specifically identifies that Florida is profitable, and that withdrawing from the whole state (rather than from underperforming counties, or less profitable off-exchange products) was never really discussed. Mayhew makes clear in his response that he does not want Aetna's reasons to be known to DOJ.

(d) Aetna's Explanation That It Made a Business Decision

Aetna argues that it in fact made a business decision to withdraw from the exchanges in the 17 counties for 2017. Aetna notes that it has been losing money in the public exchange markets nationally. It contends that there are structural problems that explain this, and that are unlikely to be fixed. And although until recently Aetna believed it was worth it to accept a short-term loss in this product line (assuming it would eventually turn a profit), the financial information received in July changed its perspective. This, Aetna argues, explains its turn-around and ultimate decision to withdraw from 11 states that include the 17 complaint counties.

Aetna has been losing money on the exchanges since the beginning. In 2014, Aetna predicted it would lose $70 million, and instead lost $100 million. Tr. 2672:18–2673:23, 2675:9–15 (Guertin). Nevertheless, it concluded it would "keep going forward" despite the losses, because it expected that a new market would be unprofitable for an initial period Tr. 2672:18–2673:23,

2675:9–15 (Guertin); DX0038. For 2015, Aetna projected a $100 million profit, but ultimately lost $131 million. Tr. 2680:14–20, 2694:20–23 (Guertin). However, Aetna was more optimistic for 2016. Because the exchanges were so new, Aetna's profit projections and plan pricing for 2014 and 2015 were largely guesswork; but going into 2016, it had claims data and therefore expected to be able to make more accurate predictions. Tr. 2689:22–2690:5 (Guertin). Aetna expected to make a "modest profit" in the exchanges in 2016. Tr. 2689:18 (Guertin).

In part, Aetna and Humana attribute thier financial loss to features of the exchange markets. For example, the requirement that all individuals purchase health insurance coverage was designed to ensure that the pool of individuals who purchased insurance on the exchanges included both healthier individuals who might be tempted to forego insurance, as well as sicker individuals. See Tr. 1830:17–19 (Broussard); Tr. 2675:21–2676:9 (Guertin); DX-0019-005; cf. Tr. 2617:16–2619:3 (Counihan). But because the penalties for failing to purchase insurance were set too low, many individuals paid the penalty rather than paying for insurance. DX0149-001; Tr. 2676:2–9 (Guertin). Thus, the pool of individuals purchasing insurance was, on the whole, sicker (and therefore costlier) than expected. DX0004; DX0019-002; DX0032-011.[44]

The exchanges also include three programs designed specifically to ensure stability in the marketplaces, known colloquially as the "three Rs": risk adjustment, risk corridors, and reinsurance. As Kevin Counihan, the CMS official responsible for overseeing the public

[44] There are other attributes of the markets that, the parties essentially agree, contributed to this costlier-than-expected pool of insurance purchasers. For example, under the "Keep What You Have Program," consumers who purchased insurance pre-ACA were able to keep it, and thus did not enter the exchange markets. These consumers were largely healthier (in part because, pre-ACA, individual insurance was only available to relatively healthy individuals). See Tr. 2674:9–2675:6 (Guertin); Tr. 1379:20–1380:10 (Bertolini); Tr. 1829:21–1830:4 (Broussard); DX0150-001. Part of this program expires at the end of 2017. Tr. 2740:25–2741:17 (Guertin); Tr. 1436:1–5 (Bertolini). Likewise, CMS adopted relaxed rules permitting consumers to purchase insurance during "special enrollment periods" outside of the annual open enrollment period. Tr. 1830:5–12 (Broussard); Tr. 1373:15–1374:16 (Bertolini); DX0302-011; DX0019-005. This functionally allowed consumers to buy plans when they were sick and cancel them when they were healthy. See Tr. 1830:5–12 (Broussard). CMS has recently tightened these rules. Tr. 1433:2–22 (Bertolini); Tr. 2650:9–2651:1 (Counihan); DX0158-002.

exchanges, explained, both risk corridors and reinsurance were designed to be temporary—they expired at the end of 2016—because they only compensate for the difficulties in accurately pricing insurance and predicting the risk pool for a new market. Tr. 2615:23–25 (Counihan). The risk corridor program was designed to limit insurers' losses and gains to account for inaccurate premium-setting when insurers did not have sufficient data to properly price their plans. DX0547-003. The reinsurance program was designed to protect insurers who incurred unexpectedly high claims costs for individual enrollees who had higher-than-expected medical costs. Tr. 2613:18–21 (Guertin). The risk adjustment program is the only one that continues to operate after 2016. It is designed to spread risk among insurers by subsidizing insurers with sicker-than-average members through payments from insurers with healthier-than-average members. Tr. 2671:14–2672:13 (Guertin). However, it is a zero-sum program; thus, if all insurers have an overall membership that is costlier-than-expected, there are no funds to distribute. See Tr. 1375:9–21 (Bertolini).

But Congress has not funded these programs as expected, and therefore CMS has not paid out the anticipated amounts due to insurers—including Aetna—under these programs. For 2014, insurers as a whole requested $2.87 billion, but CMS only paid $362 million. Tr. 2612:11–20 (Counihan). CMS has not made any risk corridor payments for 2015 or 2016. Tr. 2613:12–17 (Counihan). For Aetna specifically, in 2015 it learned that CMS would only pay $12.5 million of the $100 million risk-corridor payment that Aetna was due for 2014. Tr. 2681:24–2682:11 (Guertin); DX0003-007 ("Unlike many competitors, Aetna showed early and prudent caution regarding the [risk corridor] program and never booked an accrual." (emphasis omitted)).

This evidence persuasively explains some of the reasons that Aetna was losing money on the exchanges. CMS officials do not contest Aetna's description of how these programs work, and

at least in broad terms, do not contest the specific failings of these programs. See Tr. 2591:8–2592:4, 2610:12–15, 2623:8–18, 2625:23–2626:24 (Counihan). Moreover, CMS officials do not contest that as a result of these features of the exchanges, several insurers had already or were planning to reduce their exchange footprint moving forward. DX0067 (CMS Administrator acknowledging "there's a real possibility that the 2015 numbers are bad and the 2016 numbers won't be better"); Tr. 2592:11–2597:16 (Counihan).

But these failings of the marketplaces existed before Aetna chose to withdraw from the exchanges in August 2016. In fact, as late as July 19, 2016, Aetna was considering expanding into new exchange markets. In April 2016, Lynch and Guertin told investors that Aetna has a "very good" and "solid cost structure" in Florida and Georgia. PX0112 at 10. In June 2016, Aetna's Operating Committee considered additional investment in Florida and Georgia. Tr. 2748:23–2749:2 (Guertin); see also PX0208-029 (July 6 email discussing the same). Also in June, Aetna was compiling a "large" list of states for possible expansion in 2018. Tr. 1505:9–14 (Mayhew); PX0264-121; see also PX0259-733 (March 2016 Aetna strategy document). At that time, Aetna "Remained Committed to a Measured Multi-Year Approach to our Participation on Public Exchanges." PX0116-198 (circulated on June 29, 2016); see also PX0221-433, -435.

Aetna explains its about-face in August of 2016 as a response to financial information it received at the end of the second quarter of 2016. On June 30, 2016, CMS released the 2015 risk-adjustment report. Tr. 2723:2–2724:9 (Guertin); DX0192-002. From that report, and industry data received from a consultant between July 8 and 11, Aetna learned that it could not expect any relief from the risk-adjustment program for the 2016 plan year. Tr. 2720:16–2721:8 (Guertin); DX0204. Aetna revised its projection of a $50 million profit for its individual commercial business (that is, on-exchange and off-exchange plans together) and instead projected a loss of over $300

million for 2016. Tr. 2727:16–24 (Guertin); DX0019. This led to Aetna taking a "premium deficiency reserve" of $65 million for 2016 after consulting with its external auditor. Tr. 2728:17–22 (Guertin). (A premium deficiency reserve is an accounting tool that acknowledges that a firm's projected losses are greater than its projected premiums. See Tr. 1496:4–25 (Lynch); Tr. 2688:9–16 (Guertin)). By that point, Guertin had formed the opinion that Aetna should completely withdraw from the public exchanges in every state. Tr. 2730:18–25 (Guertin).

But notwithstanding this new financial information, Aetna continued to view the exchange business positively. As late as July 19, Aetna still held open the possibility of entering additional public exchange markets, Tr. 1437:21–24 (Bertolini), and viewed its public exchange business as having "significant potential under the right conditions," PX0120-746. In July 19 notes for a presentation to Aetna's board, Soistman wrote that Aetna "will pursue a disciplined market participation strategy, targeting deliberate growth in on-exchange silver subsidized membership." PX0120-749. His notes also indicate that Aetna still planned to expand to 20 states (combined on- and off-exchange) in 2017. PX0120-756. And although all members of the team assessing Aetna's exchange footprint believed that Aetna should exit all exchanges across the country, two of them had believed that even prior to receiving the new financial information in July 2016. See Tr. 1464:6–8 (Kelmar) (wanted to withdraw nationally since early 2016); Tr. 2739:10–2740:24 (Guertin) (wanted to withdraw nationally since the end of 2014); Tr. 1497:21–22 (Lynch); Tr. 1541:21 (Mayhew).

The Court has no reason to doubt the financial information that Aetna presented, but it is not persuaded that this information explains why Aetna withdrew from the 17 counties identified in the complaint. The Court is persuaded that this financial information led Aetna to begin the process of rethinking and reducing its exchange footprint. Indeed, it is uncontested that this led

Bertolini to form a team of executives to draft recommendations regarding Aetna's exchange footprint moving forward. It is even possible that, in the absence of this lawsuit, Aetna might have considered whether to continue its exchange participation in some counties in Florida, Georgia, and Missouri. But the documents that team put together clearly show that they did not approach the 17 complaint counties as part of the business decision. Those three states were not mentioned in the draft documents before the request to include the 17 counties. And once those counties were included in the recommendation documents, they were a separate bloc not evaluated by the same business criteria (e.g., profitability) as the other markets. Hence, while Aetna puts on a persuasive case that information received in July 2016 changed the value proposition for Aetna participating on the exchanges generally, the Court nonetheless finds on the basis of all the evidence that Aetna's decision with respect to the 17 complaint counties was not based on that value proposition. Instead, Aetna's decision not to offer on-exchange plans in the 17 counties for 2017 was a strategy to improve its litigation position.

2. Aetna Is Likely to Compete in Florida After 2017

The next question, then, is whether Aetna will compete in any of the 17 counties in 2018 and beyond. Both experts testified that one expects firms to operate in markets where they expect to be profitable. See Tr. 3034:25–3035:2 (Orszag); Tr. 1676:4–8 (Nevo). One would therefore expect Aetna to again offer plans on-exchange in those 17 counties after 2017 if it expects that doing so would be profitable. Bertolini affirmed that Aetna intends to act according to this basic intuition. Tr. 1365:7–13 (Bertolini).

Although the company was losing money in the exchanges overall, through July 2016 Aetna believed it was worth it to remain in the exchanges. This is reflected in Aetna's public statements and in its internal plans. See, e.g., PX0112 at 13 (describing exchanges as a "good

investment" despite current unprofitability). Lynch has described Aetna's plans in Florida—which was profitable—as having "a very good cost structure," PX0112 at 10, and in June 2016 Aetna discussed the possibility of further investment in Florida, Tr. 2748:23–2749:2 (Guertin); PX0208-029. Aetna's past behavior is indicative of its future behavior. Aetna believed—as late as June 2016—that participating in the exchanges was a profitable long-term endeavor despite present losses.

The fact that Aetna withdrew from the 17 counties for the 2017 plan year is weak evidence of its future behavior. Because that behavior was not driven by what one would expect—a firm's profit motive (including its leader's long term assessment of its best interest)—it is not probative of how Aetna will behave in the future. Aetna's decision regarding its participation in the 2017 exchanges in the complaint counties was not only "arguably . . . subject to manipulation," it was in fact manipulated. See Chicago Bridge & Iron, 534 F.3d at 435 (emphasis omitted). The Court therefore gives it little weight. See Gen. Dynamics, 415 U.S. at 504–05; Hosp. Corp. of Am., 807 F.2d at 1384; Bazaarvoice, Inc., 2014 WL 203966, at *73.

Indeed, there is some evidence that Aetna intends to once again offer plans in at least some of the 17 counties in the near future. Aetna withdrew in a manner specifically designed to allow it to compete in those markets within the next five years. If an insurer withdraws from a state entirely—that is, offers no on-exchange or off-exchange plans—then it cannot once again offer plans in that state for another five years under state laws. Tr. 1364:20–25 (Bertolini). However, if an insurer withdraws from on-exchange plans but remains selling off-exchange plans, then it may expand its presence in that state at any time. See Tr. 1364:20–25 (Bertolini); see also PX0262. This is known as a "dormant strategy." Tr. 1501:3–19 (Mayhew). When Aetna decided to no longer offer on-exchange plans, it continued to offer off-exchange plans in all 17 counties. Tr.

1364:8–11 (Bertolini); Tr. 1520:11–16 (Mayhew). Aetna acknowledged that this was an effort to maintain its ability to offer on-exchange plans again within the next five years. Kelmar Oct. 27, 2016, Dep. 65:3–7, admitted at 1466:25–1467:7 (Kelmar); Tr. 1467:11–13 (Kelmar); Tr. 1489:21–23 (Lynch). As Bertolini explained, Aetna wanted to maintain some presence because it "needed to remain in the game" and wanted "to remain at the table to have influence over where exchanges [go] in the future." See Tr. 1387:11–12, 1412:6–7 (Bertolini).

There is some evidence that Aetna is unlikely to offer any on-exchange plans in these 17 counties in 2018. Three executives each testified that Aetna currently has no plans to compete in any of those counties in 2018. Tr. 1468:10–16 (Kelmar); Tr. 1489:11–15 (Lynch); Tr. 1541:3–16 (Mayhew). Mayhew testified that although there are no regulatory barriers to Aetna offering on-exchange plans in 2018, there were practical ones: Aetna would need to file applications with the relevant state agencies by April 2017, which would require that Aetna have already begun the necessary preparatory work. Tr. 1541:7–16 (Mayhew). But there are no legal barriers to Aetna doing so, only practical ones. The government elicited some evidence that these practical ones would not be insurmountable: Aetna continues to have the internal infrastructure (including IT and personnel) to compete in these markets, and Aetna already has the necessary relationships with the state regulators and can meet the solvency requirements. Tr. 1520:17–19, 1520:23–25 (Mayhew); Tr. 2656:9–21 (Counihan). Moreover, Lynch recently expressed interest in meeting with CMS to improve its public exchange business (although that is not specific to these 17 counties). Tr. 2655:15–2656:8 (Counihan)

More important than the general evidence about Aetna's future exchange participation is evidence specific to the complaint counties. In 2015, Aetna operated at a loss in both Georgia and Missouri on both the on-exchange and overall offerings. See DX0009-002. As of the second

quarter of 2016, Aetna predicted a loss in those states for 2016 as well. DX0009-002. Given that one can expect firms to operate in markets where they can achieve a profit, this is strong evidence that notwithstanding the reason for Aetna's withdrawal, it is unlikely to compete in those markets in the near future. Because the merger "will not produce the forbidden result if there be no pre-existing substantial competition to be affected," Int'l Shoe, 280 U.S. at 298, the Court therefore concludes that there will be no substantial lessening of competition on the public exchanges in the 14 counties in Missouri and Georgia.

But the picture looks different for Florida. In Florida, Aetna operated at a profit both on-exchange and overall in 2015. Aetna projects that it will operate at a profit again both on-exchange and overall in 2016. In fact, Florida's overall profit is due to the strength of its on-exchange offerings—Aetna's off-exchange offerings in Florida lost money. This is strong evidence that Aetna is likely to compete on-exchange in Florida after 2017. The email exchange between Mayhew and Ciano supports this inference as well. Ciano is, presumably, knowledgeable about the Florida market, and he predicted that it would be in Aetna's best interest to remain in Florida—as reflected by his incredulity that Aetna would withdraw from Florida. See PX0132-565.

The Court finds that, given this profitability picture, Aetna is likely to offer on-exchange plans in Florida after 2017. The same is not true for Georgia and Missouri. Although Aetna's decision to withdraw from those markets was not based on sound business reasons, those markets were operating at a clear loss, and were projected to continue to do so. Without any evidence that Aetna is likely to compete in those markets after 2017, the Court will not assume that Aetna will compete there simply because it has done so (unprofitably) in the past.[45]

[45] Defendants ask the Court to take notice of political uncertainty regarding potential legislative changes to the ACA. See, e.g., Exec. Order (January 20, 2017) "Minimizing The Economic Burden of the Patient Protection and Affordable Care Act Pending Repeal" (directing agencies to minimize regulatory burdens, but not identifying any specific legislative or executive actions to be undertaken). Although there may be political uncertainty and changes

3. The Proposed Merger Would Cause Anticompetitive Effects in Florida

The government can establish its prima facie case by showing that the proposed merger would "lead to undue concentration in the market" for on-exchange plans in the three complaint counties in Florida.[46] See Baker Hughes, 908 F.2d at 982. A market concentration, as measured using the Herfindahl-Hirschmann Index (HHI), of above 2,500 and an increase in HHI of more than 200 points is sufficient to establish the government's prima facie case. Heinz, 246 F.3d at 716; Guidelines § 5.3; Staples II, 2016 WL 2899222, at *18 (applying the current version of the Guidelines); Sysco, 113 F. Supp. 3d at 52–53 (same).

Here, the government demonstrates that the proposed merger leads to presumptively anticompetitive levels of market concentration in the three complaint counties in Florida. See PX0551 (Nevo Report)) ¶¶ 312–13, Ex. 33, App'x. M; Heinz, 246 F.3d at 716. Using the most recent 2016 market-share data available: Broward County would have an HHI of 6,633 and an increase in HHI of 887; Palm Beach County would have an HHI of 3,408 and an increase in HHI of 846; and Volusia County would have an HHI of 4,294 and an increase in HHI of 690. PX0551 (Nevo Report) App'x. M, Lines 1-3. Thus, the government has established its prima facie case.[47]

But the government does not rest on the presumption—it also provides instances of specific head-to-head competition between Aetna and Humana in Florida. "Mergers that eliminate head-

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to the ACA may well be coming, it is always within Congress' power to change the law. A court has no ability to predict Congress's actions, nor is it the judiciary's place to do so. See Worth v. Jackson, 451 F.3d 854, 862 (D.C. Cir. 2006) (quoting Texas v. United States, 523 U.S. 296, 301 (1998)). This Court must apply the law to the facts at hand given the legal framework that exists now. Cf. United States v. Microsoft Corp., 253 F.3d 34, 50 (D.C. Cir. 2001) (potential for technological change to upend market "does not appreciably alter our mission in assessing the alleged antitrust violations").

[46] The government introduced evidence relevant to market concentration and anticompetitive effects in all 17 complaint counties. Because the Court has not found that Aetna is likely to compete in the counties in Georgia or Missouri in the near future, the Court only considers the evidence relevant to the counties in Florida.

[47] Nevo also conducted a regression analysis to demonstrate the relationship between market concentration and price. He found that premiums increase as market concentration increases, and that the relationship is statistically significant. PX0551 (Nevo Report) ¶¶ 322–23, Ex. 35; Tr. 1692:18–1693:8 (Nevo). Although this analysis confirms the rationale behind using HHI, demonstrating a relationship between price and concentration is not necessary to establishing the government's prima facie case or to its ultimate burden of persuasion.

to-head competition between close competitors often result in a lessening of competition." Staples II, 2016 WL 2899222, at *20; see also Sysco, 113 F. Supp. 3d at 61 (collecting cases); Horizontal Merger Guidelines § 6 ("The elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition."). Executives at Aetna regularly identify Humana as a key competitor in the public exchanges, and specifically in Florida. See, e.g., PX0108 (email to Mayhew stating that Humana is a "big competitor" in Florida); Tr. 1524:3–1525:11 (Mayhew). A March 2016 Aetna presentation described Humana as one of four "Selected Competitors," noting that Humana has "[s]trong brand recognition and community-type culture." PX0259-743; see also PX0210-707, -709 (June 1, 2016, draft Aetna presentation noting that Humana has a "significant presence" in Florida); PX0267-542 (email from Humana executive identifying Aetna, Blue Cross and Blue Shield plans, United, and Centene as "[o]ur major competitors" in marketplaces).

They also compete head-to-head on prices and product design in the complaint counties in Florida. For example, in an email discussing Aetna's pricing for 2016 in Broward County, Aetna's Florida market president stated that he was "concerned that we have dropped to #2 behind Humana" and recommended that Aetna lower its rates by 4% to "maintain #1 in Broward." PX0263-987; Tr. 1528:5–1529:24 (Mayhew); see also PX0268 at 3 (Humana document describing Aetna as Humana's "biggest competitor" in Broward County). And a Humana executive asked for information on "where Aetna's footprint is a match and what they're [sic] pricing looks like by metal tier and how their high level benefit design compares to ours." PX0266-341, -342 (specifying multiple locations including the Florida counties); see also PX0116-201 (June 28, 2016, slides comparing Aetna's footprint to Humana's footprint in public exchanges).

Thus, the government has made a very strong prima facie case that the proposed merger may substantially lessen competition in on-exchange health plans in the three complaint counties in Florida, relying on both the presumption based on market competition and on direct evidence of head-to-head competition. The "more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully." Baker Hughes, 908 F.2d at 991.

Aetna and Humana point to two rebuttal arguments in an attempt to show that "the market-share statistics give an inaccurate account of the merger's probable effects on competition." See Heinz, 246 F.3d at 715 (internal quotation marks and alterations omitted). First, they raise the weakened firm defense: that one of the merging parties (Humana) is in a weakened position such that its "market share [will] reduce to a level that would undermine the government's prima facie case." FTC v. Univ. Health, Inc., 938 F.2d 1206, 1221 (11th Cir. 1991). The companies argue that Humana's price increases for 2017 indicate that Humana's future market share will be too small for the merger to lead to an increase in market concentration that is presumptively unlawful. Humana increased its prices in the 17 complaint counties to be, on average, 58% above the lowest-priced silver plan in that county. DX0418 (Orszag Reply Report) ¶ 171; Tr. 3031:1–4 (Orszag); Tr. 1831:1–17 (Broussard). This was a reaction to losses on the exchanges, and an attempt to become profitable (or less unprofitable) in that market. See Tr. 1831:1–1832:18 (Broussard). Orszag did a regression analysis showing that such a large increase in price relative to its competitors' prices will reduce Humana's average share in these counties below 1-2%. Tr. 3033:16–3034:18 (Orszag). He then conducted an HHI analysis assuming a 1-2% market share for Humana, and found that the proposed merger would not lead to an HHI or an increase in HHI above the presumptively unlawful levels in the 17 complaint counties. Tr. 3034:9–12 (Orszag); DX0418 (Orszag Reply Report) ¶¶ 170–74.

But there is insufficient evidence for the Court to conclude that this argument applies. The "weakened competitor" argument is only persuasive when the defendants "make[] a substantial showing that the acquired firm's weakness, which cannot be resolved by any competitive means, would cause that firm's market share to reduce to a level that would undermine the government's prima facie case." Univ. Health, 938 F.2d at 1221 (emphasis added). "Courts 'credit such a defense only in rare cases.'" ProMedica Health Sys., Inc. v. FTC, 749 F.3d 559, 572 (6th Cir. 2014) (quoting Univ. Health, 938 F.2d at 1221). Indeed, it has been described as "the Hail-Mary pass of presumptively doomed mergers," ProMedica Health, 749 F.3d at 572; see also Arch Coal, 329 F. Supp. 2d at 154 (describing it as the "'weakest ground of all for justifying a merger'" (quoting Kaiser Aluminum & Chem, 652 F.2d at 1339)). This argument is disfavored because it fails to account for the fact that "financial difficulties not raising a significant threat of failure are typically remedied in a moderate length of time," whereas a merger is a relatively permanent action that eliminates the potential for future competition between the merging parties. 4A Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 963a3 (4th ed. 2016). There is no argument here that Humana faces a "significant threat of failure"—if so, it could raise the failing firm defense (a separate, and entirely different, theory), which it does not.

Indeed, Humana has indicated that it is remedying its current weakness in the exchange markets. Humana's CEO testified that it is taking "corrective actions" to improve its business. Tr. 1876:7–1878:6, 1880:21–1881:3 (Broussard); see also PX0407 at 12 (Humana press release). It has adopted "a more insurance focused approach," is using narrower networks, and is featuring "leaner product design." Tr. 1876:19–1877:6, 1879:8–12 (Broussard). It also recently met with CMS to learn about ways to improve this product line. Tr. 2653:14–2655:23 (Counihan). Thus, Humana expects to offer "a high-quality and ultimately stable individual commercial health plan"

despite the price increase. Tr. 1880:21–1881:3 (Broussard); see also PX0407 at 12. These are exactly the type of remedies one would expect a weakened, but not failing, firm to take—which is why the failing firm defense is only available if the firm "cannot resolve" its weaknesses. The defendants have not pointed to any evidence that Humana cannot remedy its current market weakness. Hence, the Court finds this rebuttal argument unpersuasive.[48]

Defendants' second argument is that this market is too volatile, and has too much entry and exit, for HHI analysis to accurately predict the state of competition in the market in the future. A market may be so "new" and "volatile" that the "bare market concentration ratios or percentages" might not "accurately depict the economic characteristics of the market." United States v. Siemens Corp., 621 F.2d 499, 506 (2d Cir. 1980) (internal quotation marks omitted). This argument fails because the companies do not point to any specific evidence to support it. It is true that this market is new: the exchanges have only operated since 2013 (for the 2014 plan year). PX0551 (Nevo Report) ¶ 273. It is also true that there is some volatility—or at least, some exits. Several insurers have exited the public exchanges for 2017. See Tr. 3025:13–3026:17 (Orszag) (for 2017, 36 insurers have withdrawn nationwide or reduced their footprint); see also DX0352-004.

But the companies do not present any evidence or argument for why the market's youth or number of exits make HHI an inappropriate tool to project market concentration. As the Second Circuit acknowledged in Siemens, perhaps there are some markets where HHI is a poor indicator of concentration due to the market's general unpredictability, Siemens, 621 F.2d at 506, but defendants have not shown why this is one. Nor have they cited any cases explaining when youth or volatility (or here, exits) would make HHI too unreliable to form the basis of a prima facie case. Without any facts or law to go on, the Court is not persuaded by defendants' argument.

[48] The government also raises other criticisms of Orszag's regression analysis and therefore his HHI calculation. Because the Court is not persuaded by this rebuttal argument, the Court does not reach those points.

C. Conclusion

In sum, the Court concludes that competition is likely to be substantially lessened in the three complaint counties in Florida. The Court analyzes Aetna as an actual competitor, not an "actual potential competitor," in the public exchanges because of its active participation in those markets even if it is not offering plans for 2017. See El Paso Nat. Gas, 376 U.S. at 654–662; Polypore Int'l, 686 F.3d at 1213–16; Warner Commc'ns, 742 F.2d at 1165. Because the Court looks beyond 2017, the question necessarily becomes whether Aetna will compete in the 17 complaint counties in 2018 and later years. After thoroughly reviewing the evidence, the Court concludes that Aetna withdrew from the public exchanges in the 17 complaint counties to evade judicial scrutiny of the proposed merger. It finds particularly persuasive the contemporaneous emails that reveal Aetna's treatment of the 17 complaint counties as distinct from other locations where Aetna was considering withdrawal. Therefore, the Court gives that decision little weight as evidence of Aetna's likely future participation in the public exchanges. See Gen. Dynamics, 415 U.S. at 504–05. However, notwithstanding the reasons for Aetna's withdrawal, there is insufficient evidence for the Court to conclude that Aetna is likely to compete in the complaint counties in Georgia and Missouri in the near future. This is particularly true given that the public exchanges in Georgia and Missouri were not profitable for Aetna in 2015, and were not projected to be profitable in 2016. See DX0009-002.

But the Court concludes that Aetna is likely to compete on the public exchanges in the three complaint counties in Florida after 2017. Florida's on-exchange markets were profitable for Aetna in 2015, and were projected to be in 2016. See DX0009-002. The Court finds the proposed merger is likely to cause a substantial lessening of competition in these three counties in Florida. The government presented a strong prima facie case for the anticompetitive effects of the merger

based on market concentration as measured by HHI, and additional evidence of direct head-to-head competition between Aetna and Humana. Hence, the Court concludes that the proposed merger is likely to substantially lessen competition in violation of section 7 of the Clayton Act in the public exchange markets in the three complaint counties in Florida.

III. Efficiencies

Finally, Aetna and Humana seek to defend the merger on the ground that it will create substantial, procompetitive efficiencies. "Although the Supreme Court has never recognized the 'efficiencies' defense in a Section 7 case, the [D.C. Circuit] as well as the Horizontal Merger Guidelines recognize that, in some instances, efficiencies resulting from the merger may be considered in rebutting the government's prima facie case." Sysco, 113 F. Supp. 3d at 81 (citing Heinz, 246 F.3d at 720); see also Guidelines § 10. The Court will therefore consider Aetna's and Humana's efficiencies defense, while keeping in mind that "the high market concentration levels present in this case require, in rebuttal, proof of extraordinary efficiencies." Heinz, 246 F.3d at 720; see also Guidelines § 10 ("The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to consumers."). Aetna and Humana must "substantiate" their efficiency claims. H&R Block, 833 F. Supp. 2d at 89 (quoting Guidelines § 10).

Efficiencies may benefit the economy insofar as they "enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products." Guidelines § 10. Put differently, the companies must "demonstrate that their claimed efficiencies would benefit customers," Sysco, 113 F. Supp. 3d at 82, and, more particularly, the customers in the challenged markets, see Guidelines § 10 ("[T]he Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's

potential harm to customers in the relevant market."); United States v. Phila. Nat'l Bank, 374 U.S. 321, 370 (1963) ("anticompetitive effects in one market" cannot be justified by "procompetitive consequences in another."). When assessing whether efficiencies might diminish or outweigh the competitive harm resulting from a merger, courts will give weight only to efficiencies that are cognizable—i.e., "merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service." Guidelines § 10. "In other words, a 'cognizable' efficiency claim must represent a type of cost saving that could not be achieved without the merger and the estimate of the predicted saving must be reasonably verifiable by an independent party." H&R Block, 833 F. Supp. 2d at 89.

To estimate the efficiencies that would result from their merger, Aetna and Humana undertook a wide-ranging review. The review was overseen by a team of executives from both companies, called the integration management office, which "sat in the middle of all the integration activities" and directed those efforts. Tr. 2769:17–18, 2769:25–2770:6, 2770:22–24 (Horst). Much of the detailed analysis was performed by 29 "functional teams." Tr. 2768:18–19 (Horst). These teams were intended to assess how particular business functions worked at Aetna and Humana respectively, and then to estimate the efficiencies that might result from combining them. Tr. 2772:1–12 (Horst); see also DX0202-002 (listing the 29 functional teams and their leaders). At Aetna, more than 100 employees work full-time on integration, although many more have probably worked on the related analyses at various times. See Tr. 2792:10–16 (Horst); Tr. 1420:13–14 (Bertolini) ("hundreds of people" are working on evaluating efficiencies). Third-party consultants were also retained to assist with the process, particularly when the review required analysis of confidential business information. Tr. 2783:19–2784:2 (Horst).

At the "very beginning" of the efficiencies review process, the integration management office instructed the functional teams to focus only on merger-specific efficiencies. Tr. 2777:15–2778:3 (Horst). For instance, one document used in the efficiencies review includes a slide asking "What is a valid synergy?" DX0043-013. Among those savings that are "NOT a Valid Synergy Hypothesis" are savings "that would occur regardless of the merger." DX0043-013. At the conclusion of the review process, Aetna estimated that the transaction would produce $2.8 billion in annual efficiencies every year after 2020. Tr. 2819:20–23 (Horst); DX0030-003. Aetna is confident about its efficiencies estimates because of its experience with the 2013 acquisition of Coventry. Aetna's efforts to estimate and achieve efficiencies through the Coventry acquisition were a "template" for its work on the Humana transaction: "[I]t's really the same. I mean, it's the same actions. It's the same people. It's the same process." Tr. 2783:6–10 (Horst). Aetna claims to have achieved $1.1 billion in annual efficiencies through the Coventry acquisition, despite initially projecting only $400 million. Tr. 2799:6–12 (Horst).

Aetna and Humana retained an expert, Rajiv Gokhale, to assess whether the $2.8 billion in claimed efficiencies "classify as merger-specific, verifiable, and cognizable" under the Guidelines. Tr. 2851:19–23, 2858:13–18 (Gokhale). Gokhale found $2 billion in cognizable efficiencies flowing to the combined company, and another $300 million that would flow directly to the government and consumers.[49] Tr. 2852:2–12 (Gokhale); DX0577 (Gokhale Reply Report) Ex. 1-1. However, the government's expert, Christine Hammer, also evaluated the claimed efficiencies. Not surprisingly, she raises a variety of issues with Aetna's calculations and Gokhale's conclusions, finding only $73.2 million in cognizable efficiencies. Tr. 3387:23–3388:8 (Hammer).

[49] Gokhale's opinion relates only to those efficiencies claimed from 2020 onward. The companies do not claim savings prior to that date. Tr. 2923:1–7 (Gokhale); Tr. 3399:25–3400:3 (Hammer).

On balance, the Court is unpersuaded that the efficiencies generated by the merger will be sufficient to mitigate the transaction's anticompetitive effects for consumers in the challenged markets. As an initial matter, testimony from Aetna's and Humana's economist indicates that, in this industry, only about 50% of reductions in marginal costs will be passed through to consumers.[50] Tr. 3109:7–21 (Orszag) (estimating a pass-through rate of just 42%). That matters because, as Orszag continued, "[w]e're focused on the effects on consumers," not "on profits of firms." Tr. 3109:24–3110:1 (Orszag). Orszag's analysis suggests that a significant amount—perhaps most—of the efficiencies generated by this merger will accrue to the merged firm rather than to consumers. It is not even clear what proportion of the efficiencies that are passed on to consumers will be shared with those in the three public exchange markets in Florida and the 364 markets for Medicare Advantage. As Gokhale acknowledges, Aetna and Humana are both national insurers with commercial, Medicare, and Medicaid businesses. DX0420 (Gokhale Report) ¶ 12. Yet, according to Hammer, and as far as the Court can tell, Gokhale did not attempt to attribute portions of his claimed efficiencies to the specific product or geographic markets at issue in this case. See Tr. 3435:14–24, 3465:1–4 (Hammer).

Aetna and Humana do not really argue otherwise.[51] Instead, they invoke an exception to the Guidelines' general rule that efficiencies should be evaluated in the context of "the relevant

[50] Reductions in fixed costs are even less likely to be passed on to consumers. According to the Guidelines, "[e]fficiencies relating to costs that are fixed in the short term are unlikely to benefit customers in the short term." Guidelines § 10 n. 15. Moreover, efficiencies "such as those relating to procurement, management, or capital cost[] are less likely to be merger-specific or substantial, or may not be cognizable for other reasons." Id. at § 10. The companies cite $919 million in these kinds of efficiencies, including the "efficiencies to be gained from eliminating overlapping infrastructure, like IT services, as well as eliminating overlap in procurement services and the lower costs obtained by moving the merged entity onto lower cost procurement contracts." Defs.' Proposed Findings & Conclusions at 98.

[51] During Hammer's cross-examination, counsel for Aetna asked her whether Exhibit 15 to Gokhale's reply report represented an attempt to allocate efficiencies to the challenged markets. Tr. 3465:20–3466:12 (Hammer); see also DX0577 (Gokhale Reply Report) Ex. 15. Although Hammer agreed that Exhibit 15 did reflect such an attempt, Aetna and Humana make no use of this exchange or the underlying exhibit. Without further explanation of this exhibit's significance, if any, the Court cannot rely on it here.

market." Guidelines § 10. The exception provides that the agencies may, "in their prosecutorial discretion, . . . consider efficiencies not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s)." Id. § 10 n.14. These "[i]nextricably linked efficiencies are most likely to make a difference when they are great and the likely anticompetitive effect in the relevant market(s) is small so the merger is likely to benefit customers overall." Id. But that is not the situation here. As predicted by the post-merger HHI scores, the anticompetitive effects in the challenged markets are likely to be very substantial. And as a result, the companies must point to "proof of extraordinary efficiencies" in rebuttal. Heinz, 246 F.3d at 720. Footnote 14 of the Guidelines does not help them to do so.

These shortcomings alone severely diminish the force of the companies' efficiency arguments. And when the Court looks to the efficiency claims themselves, further problems emerge. Hammer has raised valid issues regarding several categories of claimed efficiencies, including those arising out of pharmacy rebate maximization, network medical cost savings, and clinical services savings. See Pls.' Proposed Findings & Conclusions at 168–70. Aetna and Humana tellingly do not attempt to defend their estimates in these areas, even after Hammer's critique.

First, consider the $202.8 million in cognizable efficiencies that Gokhale finds regarding pharmacy rebate maximization. See DX0577 (Gokhale Reply Report) Ex. 5-1. Some of these efficiencies were calculated using a "best of the two contracts" approach. Under that approach, if Aetna and Humana both contract with a manufacturer for a particular drug, then following the merger the company with the lower-rebate contract switches its purchases to the higher-rebate contract, thereby generating savings for the merged company. Tr. 2899:6–11 (Gokhale). To

calculate the rebate difference between the contracts, which ultimately drives the magnitude of the savings, Gokhale looked to the rebates at a particular point in time. See Tr. 2903:10–16 (Gokhale).

But Hammer has criticized that approach. Because the rebates could vary over time, she contends, a more accurate assessment of the differential would be achieved by comparing average rebates over time, rather than rebates at any one time, which could produce results that are misleading. Tr. 3405:13–25, 3406:19–22 (Hammer). That error would be compounded, moreover, if savings based on that rebate differential are then predicted forward in perpetuity, as was done by Gokhale (and by the clean-room consultants who conducted the underlying analysis). Tr. 3403:4–10 (Hammer). Hammer supported her analysis with a series of illustrative examples that, in the Court's view, raise real concerns about the reliability of the companies' pharmacy rebate maximization efficiencies.

The Court has similar concerns regarding the claimed $258.6 million in cognizable network efficiencies. See DX0577 (Gokhale Reply Report) Ex. 1-1. Most of these efficiencies were also calculated using a best of the two contracts approach, but here the emphasis was on provider contracts, like those with hospitals. Tr. 2917:19–2918:6 (Gokhale). In the provider context, however, there are real impediments to fully implementing a best of the two contracts approach, as the providers may object to being switched from a contract with a higher reimbursement rate to one with a lower rate. To evaluate this issue, a third-party consultant, PricewaterhouseCoopers, reviewed the underlying provider contracts and interviewed a number of Aetna and Humana field managers about the prospects for switching providers from one contract to another. Tr. 3430:25–3431:5 (Hammer). Some of the field managers sounded a pessimistic note about the willingness of providers to switch. PX0192-177 ("I would be surprised if the hospitals don't initiate a terminat[ion] notice with us now that they've been through this process before."); PX0141-154

("We've had one hospital come to us and say they would proactively terminate [contracts] if either plan tries to realize a better rate.").

These issues may not be insurmountable but Gokhale did not wrestle with them by, for instance, reviewing the underlying provider contracts. Tr. 2936:3–12 (Gokhale). Instead, he noted that PricewaterhouseCoopers "took a very large hair-cut to the total savings estimated" and, without much analysis, he concluded that the savings were verifiable. DX0420 (Gokhale Report) ¶¶ 203, 206; see also PX0562 (Hammer Reply Report) ¶¶ 205–26. The Court is less sure. Without a more robust analysis, which the companies have not provided, the Court cannot conclude that these network efficiencies are verifiable and likely to be passed on to consumers.

As a third example, Hammer has identified flaws with the $169.2 million of concurrent review efficiencies. See DX0557 (Gokhale Reply Report) Ex.6-1; see also PX0562 (Hammer Reply Report) ¶ 171. Concurrent review is a process by which insurers review patient cases in real time, and recommend against (or deny payment for) medical care above what is recommend by their clinical guidelines. Tr. 2827:8–18 (Horst). So, for instance, a treating physician might recommend that a patient be admitted to the hospital. But through the concurrent review process, and relying on its clinical guidelines, Aetna might deny payment for the hospitalization and recommend that the patient be "put into observation" instead. Tr. 2827:19–2828:2 (Horst). The companies' efficiencies analysis assumes that, where Aetna and Humana have different denial or "conversion to observation" rates, the merged firm will adopt the higher rates. Tr. 2911:12–18 (Gokhale). Gokhale found that these efficiencies were cognizable.

But as Hammer points out, this analysis does not seem rooted in a search for a shared set of best-practices regarding concurrent review. If the "efficiency" is derived entirely from an increase in denial rates, it is not clear why that increase could not have been achieved without the

merger. Tr. 3428:1–3429:14 (Hammer); see also PX0562 (Hammer Reply Report) ¶¶ 184–90. Moreover, there is some tension between the claimed concurrent review efficiencies and the claimed network efficiencies. As both could take money out of providers' pockets, there are challenges inherent in implementing them at the same time in the same place. Tr. 3432:6–17, 3429:15–3430:8 (Hammer). In an attempt to resolve that tension, PricewaterhouseCoopers recommended a strategy for leading with the network efficiencies in some locations, with the concurrent review efficiencies in others, and, in still other locations, proceeding with both simultaneously. PX0147-267; see also PX0562 (Hammer Reply Report) ¶¶ 232–38. That was not adopted. Instead, in the companies' efficiency figures these complexities seem to have been dealt with through another largely unexplained "discount factor." DX0420 (Gokhale Report) ¶ 175. Once again, without more concrete analysis, the Court is unable to conclude that these efficiencies are entirely verifiable.

To conclude, the Court has some serious concerns regarding the companies' efficiencies claims. It is very likely that a significant share of the claimed efficiencies may be retained by the merged firm rather than being passed on to consumers. Moreover, because Gokhale has not attributed the claimed efficiencies to the particular markets challenged in the complaint, the Court cannot be confident that the consumers who are likely to be harmed by the merger would also share in its benefits. But even assuming that some of the claimed efficiencies would reach these consumers, many of the companies' claims are not cognizable. Hammer has identified a number of valid issues with the companies' analyses—most of which have gone entirely unanswered—that serve to further undermine the reliability of the efficiency claims.

Nor can the companies shore up their efficiency claims by comparisons to the Aetna-Coventry merger. Gokhale did not analyze whether the $1.1 billion in claimed efficiencies

resulting from the Coventry merger were actually cognizable. Tr. 2985:12–18 (Gokhale). And given the considerable flaws in Aetna's current claims, the fact that the Coventry efficiencies were calculated by similar methods is of very limited comfort. No doubt Aetna and Humana have worked hard to identify efficiencies related to their proposed merger. But because they face a presumption of illegality based on very high concentration measures, they must marshal evidence of "extraordinary efficiencies" in rebuttal. Heinz, 246 F.3d at 720. In the Court's view, they have not done so. "[T]he critical question raised by the efficiencies defense is whether the projected savings from the merger are enough to overcome the evidence showing that possibly greater benefits can be achieved by the public through existing, continued competition." Sysco, 113 F. Supp. 3d at 86 (alterations omitted) (quoting Cardinal Health, 12 F. Supp. 2d at 63). Here, Aetna and Humana have put forward very little evidence that would tempt a consumer in one of the challenged markets to choose the merger over continued competition. For that reason, their efficiency defense fails.

CONCLUSION

In this case, the government alleged that the merger of Aetna and Humana would be likely to substantially lessen competition in markets for individual Medicare Advantage plans and health insurance sold on the public exchanges. After a 13-day trial, and based on careful consideration of the law, evidence, and arguments, the Court mostly agrees.

Most importantly, the merger would likely substantially lessen competition in the market for individual Medicare Advantage in all 364 complaint counties. This conclusion is based on identification of the proper product market, the overwhelming market concentration figures generated by the merger, and the considerable evidence of valuable head-to-head competition between Aetna and Humana, which the merger would eliminate. The companies' rebuttal

arguments are unpersuasive: federal regulation would likely be insufficient to prevent the merged firm from raising prices or reducing benefits, and neither entry by new competitors nor the proposed divestiture to Molina would suffice to replace competition eliminated by the merger.

The merger would also be likely to substantially lessen competition on the public exchanges in three Florida counties. Because Aetna's withdrawal from the public exchanges in the 17 complaint counties was to avoid antitrust scrutiny, the Court gives that evidence little weight in predicting whether Aetna will continue to compete on the exchanges in the future. The Court concludes that the merger is likely to substantially lessen competition on the exchanges in the three counties in Florida where Aetna is likely to compete in the future. The Court's conclusion is again based on the level of market concentration and the evidence of substantial head-to-head competition between Aetna and Humana that would be lost. Neither of defendants' rebuttal arguments is persuasive. There is insufficient evidence to conclude that Humana's market share will decline such that the merger would not increase market concentration or that the markets are too volatile to reasonably predict the anticompetitive effects of the merger.

Finally, the Court is unpersuaded that the efficiencies generated by the merger will be sufficient to mitigate the anticompetitive effects for consumers in the challenged markets.

Therefore, for all these reasons, the proposed merger of Aetna and Humana will be enjoined. A separate Order has issued on this date.

/s/
JOHN D. BATES
United States District Judge

Dated: January 23, 2017