U.S. and Plaintiff States v. Aetna Inc. and Humana Inc.

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Assignment: Economic analysis of the likely effects on competition from the proposed merger of Aetna and Humana

Opinions:

1. Substantial lessening of competition in markets for Medicare Advantage plans

2. Substantial lessening of competition in markets for Individual Commercial plans

3. Substantial harm to consumers – higher prices and lower benefits
Medicare Advantage
Economic analysis of the likely effects of a merger

• **Key question:** will the proposed merger lessen competition?

• **Multiple step analysis**
  1. Define relevant product and geographic antitrust markets
  2. Compute competitive effects: structural presumption and empirical analysis
  3. Consider potential mitigating factors: divestiture, entry, and efficiencies
1. The relevant antitrust market is Medicare Advantage (MA) plans sold to individuals within each Complaint county.

2. The proposed merger will lessen competition in each Complaint county and harm consumers.

3. The potential mitigating factors put forward are insufficient to restore the lost competition.
• Market definition is part of the standard analytical framework
  • Horizontal Merger Guidelines § 4

• Two main purposes
  1. Identify sets of products where competitive concerns arise
  2. Measure market shares and concentration (which can illuminate competitive effects)
Guiding principles of market definition

- Consumer substitution limits firms’ ability to raise prices
  - Therefore market definition focuses on “customers’ ability and willingness to substitute away from one product to another in response to a price increase” (Guidelines § 4)

- Narrowly defined markets more accurately reflect competition
  - The relevant market need not include all substitutes, and “As a result, properly defined antitrust markets often exclude some substitutes to which some customers might turn in the face of a price increase even if such substitutes provide alternatives for those customers.” (Guidelines § 4)
The hypothetical monopolist test

• How do we know the market is not too narrow?

  • Guidelines § 4: “a group of products is too narrow to constitute a relevant market if competition from products outside that group is so ample that even the complete elimination of competition within the group would not significantly harm either direct customers or downstream consumers.”

  • Apply the hypothetical monopolist test to ensure candidate markets are not overly narrow and to test reasonable interchangeability
The hypothetical monopolist test defined

- Guidelines § 4.1.1 explain that “the test requires that 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.”
• **Counties constitute relevant geographic markets**
  - Mr. Orszag agrees on definition
  - Healthcare is local
  - CMS regulations
  - Documents and testimony
  - Insurers offer different plans in different counties
  - Hypothetical monopolist test
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. Market realities
2. Documentary evidence
3. Actual customer substitution
4. Academic literature
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. **Market realities:** MA plans are distinct from other Medicare options
2. Documentary evidence
3. Actual customer substitution
4. Academic literature
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
44 percent of relevant seniors chose MA plans in 2015

- Original Medicare only (22.8%, 6.0m)
- Original Medicare with Medigap (33.7%, 8.9m)
- Individual Medicare Advantage (43.6%, 11.5m)
- Other (1.4%, 0.4m)
- Individual Special Needs Plans (6.5%, 1.8m)
- Original Medicare with Medicaid (28.1%, 7.7m)
- Group Medicare Advantage (11.2%, 3m)
- Original Medicare with employer-sponsored coverage (52.8%, 14.4m)

Medicare options available to all seniors (49.1%, 26.4m)

Eligibility-restricted Medicare options (50.9%, 27.3m)
MA plans are distinct from other Medicare options

<table>
<thead>
<tr>
<th>Medicare Advantage</th>
<th>Original Medicare (with or without supplemental insurance)</th>
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<tbody>
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<td></td>
<td>Parts A &amp; B Only</td>
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<td>Basic benefits</td>
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<td>Private insurer branding</td>
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<td>Parts A &amp; B Only</td>
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<td>Additional benefits offered by most plans</td>
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<td>Wellness benefits</td>
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<tr>
<td>Other benefits</td>
<td>✓</td>
</tr>
</tbody>
</table>
More seniors are choosing MA over time

Share of Medicare Advantage enrollees out of seniors with individual Medicare coverage

- 2011: 37.8%
- 2012: 39.7%
- 2013: 41.1%
- 2014: 42.1%
- 2015: 43.6%
- 2016: 44.4%
Many seniors would be affected by the proposed merger

- **Humana and Aetna are #1 and #4** in individual MA nationwide, and Aetna is growing aggressively.

- Aetna and Humana have **59 percent** of the 1.7 million MA enrollees in the Complaint counties.

![Pie chart showing the distribution of enrollees between Aetna and Humana plans and other MA insurer plans]
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. Market realities

2. Documentary evidence:
   1. MA appeals to different seniors
   2. Defendants price MA separately from Medigap

3. Actual customer substitution
4. Academic literature
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
Seniors first choose MA, then a plan

Decision Tree – Brand, Network and Costs are Key Considerations.

As consumers start to investigate, they learn some plans have networks and that premiums and costs vary. The choice of an Advantage plan vs. a Med Supp plan is made on network and cost factors.

What brands will I consider?

Am I willing to accept network restrictions?

Typically 2-3 brands – brand presence is important!

YES – Advantage Plan
How restrictive a plan?
Are my current doctors on plan? Which hospitals? Well-known specialists? Do I have to get referrals?
How much will the premium cost?
Are my drugs covered? At what cost?
Co-pays, deductibles and other costs?
Are extra benefits included?

HMO
More restrictions
Lower cost

PPO
More flexibility
Higher cost

NO – Medicare Supplement:
How much will the premium cost?
Out of pocket costs vs. none?
Are extra benefits included?

Plan Type
Plan F, Plan N, etc.

Choose PDP Plan

Humana
Source: Humana Age In Longitudinal Study 2012, other qualitative research
Seniors are more likely to choose MA if:
- Lower income
- Urban residence
- Better health

Diversity ("heterogeneity") in preferences
• A firm prices its products jointly when these products compete closely with one another

• Documents and testimony show that the Defendants price MA plans separately from Medigap
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. Market realities
2. Documentary evidence
3. **Actual customer substitution:**
   1. Switching mostly within MA
   2. MA appeals to different seniors
4. Academic literature
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
• How many seniors leaving one MA plan substitute to another MA plan?

• Switching data serve three purposes:
  1. Data on actual substitution patterns directly inform market definition
  2. Evaluate diversity in senior preferences seen in documentary evidence
  3. Reality check on my empirical analysis
Seniors who switch are likely to stay within MA

Switching within MA

- Using CMS data (Open Enrollment) 2015: 87.3%
- Based on cancelled plans (Open Enrollment) 2015: 86.5%
- Using Parties' data (Entire calendar year) 2012–2015: 85.0%
MA appeals to a distinct set of seniors

Switching within MA

- Using CMS data (Open Enrollment) 2015: 87.3%
- Based on cancelled plans (Open Enrollment) 2015: 86.5%
- Using Parties' data (Entire calendar year) 2012–2015: 85.0%
- Switching expected if MA plans not distinct from other Medicare options: 38.6%
Evidence shows observed substitution is related to price

- Are seniors switching due to price or other reasons?

- Most observed substitution is due to price
  1. Party documents
  2. Survey data
  3. Kaiser Family Foundation study
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. Market realities
2. Documentary evidence
3. Actual customer substitution
4. **Academic literature**: Many seniors have a distinct preference for MA plans as a group
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
Several academic papers study how seniors choose MA plans.

Reviewing the academic literature serves two purposes:

1. Guidance on how to analyze consumer choice of MA plans
2. Prior estimates on customer substitution
The academic literature uses the nested logit model to study choice of MA plans.

- MA plans are a nest
- All other coverage options are the “outside option”

The nested logit model

- Used when some customers may have a distinct preference for a group of choices (a “nest”) over other choices

The model allows us to analyze how customers substitute in response to price changes.
• Nesting parameter measures preference for MA plans
  • Zero: no distinct preference for MA plans
  • Positive: many seniors have a distinct preference for MA plans
All papers find a positive nesting parameter

- Implies high switching within MA in response to price changes

<table>
<thead>
<tr>
<th>Study</th>
<th>Years studied</th>
<th>Authors’ preferred nesting parameter estimate</th>
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<tbody>
<tr>
<td>Guglielmo</td>
<td>2008–2011</td>
<td>0.41</td>
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<tr>
<td>Curto et al.</td>
<td>2006–2010</td>
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<tr>
<td>Dunn</td>
<td>2004–2007</td>
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<td>Hall</td>
<td>1999–2002</td>
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<td>Dafny and Dranove</td>
<td>1994–2002</td>
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<td>Town and Liu</td>
<td>1993–2000</td>
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<tr>
<td>Atherly et al.</td>
<td>1998</td>
<td>0.55–0.59</td>
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Nevo Report, Exhibit 9; Nevo Reply Report, FN 49
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market.

1. Market realities
2. Documentary evidence
3. Actual customer substitution
4. Academic literature
5. **Empirical analysis of plan choice:** All models in this matter confirm many seniors have distinct preference for MA
6. Hypothetical monopolist tests
The empirical analysis of plan choice serves two purposes:

1. Estimate consumer choice using most recent data and compare to results in academic literature

2. Provide inputs for:
   1. Hypothetical monopolist tests
   2. Competitive effects analyses
• All models estimated in this matter – mine and Mr. Orszag’s – agree that many seniors have a distinct preference for MA plans as a group
Empirical analysis of plan choice

• Analyze using nested logit model, with MA as a group ("nest")
  • Consistent with the market realities and documentary evidence
  • Follow the academic literature

• Choices depend on the price paid, benefits, and plan attributes

• Estimate using standard methods and CMS data

• Estimates consistent with the results in the academic literature
My estimates reflect actual customer substitution

Switching within MA

- Using CMS data (Open Enrollment) 2015: 87.3%
- Based on cancelled plans (Open Enrollment) 2015: 86.5%
- Using Parties' data (Entire calendar year) 2012–2015: 85.0%
- Predicted by my model: 69.6%
My estimates better reflect actual substitution than Mr. Orszag’s.
• All models qualitatively agree that many seniors have a distinct preference for MA plans

• Models differ in data, price, controls, or instrumental variables

• Any differences between the models are due to technical details that do not impact the relevant conclusions
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market

1. Market realities
2. Documentary evidence
3. Actual customer substitution
4. Academic literature
5. Empirical analysis of plan choice

6. **Hypothetical monopolist tests**: MA plans constitute a relevant antitrust product market
• Guidelines § 4.1.1 explain that “the test requires that 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.”

• “The Agencies most often use a SSNIP of five percent of the price paid by customers for the products or services to which the merging firms contribute value.” (Guidelines § 4.1.2)
Higher prices involve a trade-off

- If the hypothetical monopolist increases price:
  - Lose some sales and associated profits...
  - But, higher profits on remaining sales

- The hypothetical monopolist sets prices to balance these effects
• Review all reasonably available and reliable evidence to identify a candidate market (Guidelines § 4.1.3)

• Apply the hypothetical monopolist test to test reasonable interchangeability

  “The Agencies employ the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets. The Agencies use the hypothetical monopolist test to identify a set of products that are reasonably interchangeable with a product sold by one of the merging firms.” (Guidelines § 4.1.1)
Hypothetical monopolist tests confirm product market definition

- Tested MA plans as a candidate product market
  - Based on the market realities, documentary evidence, switching data, academic literature, and demand estimation

- Multiple formulations of the hypothetical monopolist test confirm that MA plans constitute a relevant antitrust product market
• Test #1: Ask if the hypothetical monopolist’s profits will increase by raising the price of one merging party MA plan by a SSNIP

“When the necessary data are available, the Agencies also may consider a ‘critical loss analysis’ to assess the extent to which it corroborates inferences drawn from the evidence noted above. Critical loss analysis asks whether imposing at least a SSNIP on one or more products in a candidate market would raise or lower the hypothetical monopolist’s profits.” (Guidelines § 4.1.3)
Single-product test confirms market definition under all estimates

- **Using my estimates**, the HMT confirms the candidate market in all Complaint counties
  - Five and ten percent SSNIP profitable for **all Complaint counties**

- **Using Mr. Orszag’s estimates**, the HMT confirms the candidate market in nearly all Complaint counties
  - Five percent SSNIP profitable for **over 99 percent** of enrollment
  - Ten percent SSNIP profitable for **over 89 percent** of enrollment

Nevo Report, Exhibit 12; Nevo Reply Report, Exhibit 2
Test #2: same as Test #1 using estimates and model from the academic literature

- Use Curto et al. estimates
- Among academic papers, least favorable to passing the test
  - Highest estimate of price sensitivity
  - Lowest nesting parameter

MA plans constitute relevant antitrust market using Curto et al. estimates of customer substitution
• **Test #3:** Allow the hypothetical monopolist to increase the price of *all* MA plans

• Test whether the profit-maximizing price increase for at least one merging party plan is more than a five percent SSNIP

• To implement this test, conduct a merger simulation
Merger simulation accounts for post-merger pricing incentives

• Widely accepted, standard merger simulation model combines:
  • Customer substitution from the empirical analysis
  • Standard economic model of price setting

• Computes the effect of the merger to monopoly on pricing decisions
Price increase by a single firm

- Higher profits on remaining sales
- Profits lost to other MA plans
- Profits lost to other options
The intuition behind merger simulation

Price increase by a hypothetical monopolist of all MA plans

Profits on other MA plans

Higher profits on remaining sales

Profits lost to other options
• **Using my estimates**, the HMT confirms the candidate market in all Complaint counties
  - The profit-maximizing price increase in at least one plan was a SSNIP or higher in all Complaint counties

• **Using Mr. Orszag’s estimates**, the HMT confirms the candidate market in nearly all Complaint counties
  - The profit-maximizing price increase in at least one plan was a SSNIP or higher in counties representing over 99 percent of enrollment
Multiple sources of evidence demonstrate that MA plans constitute a relevant antitrust product market.

1. Market realities
2. Documentary evidence
3. Actual customer substitution
4. Academic literature
5. Empirical analysis of plan choice
6. Hypothetical monopolist tests
MA plans constitute a relevant antitrust product market

• Each analysis, on its own, supports my conclusion regarding product market definition

• Jointly, they provide **clear and consistent evidence** that MA plans constitute a relevant antitrust product market
Summary of opinions on Medicare Advantage

1. The relevant antitrust market is Medicare Advantage (MA) plans sold to individuals within each Complaint county.

2. The proposed merger will lessen competition in each Complaint county.

3. The potential mitigating factors put forward are insufficient to restore the lost competition.
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county

1. Concentration measures
2. Merger simulation
3. Documentary evidence
4. Future competition
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. **Concentration measures:** The proposed merger would increase concentration in already highly concentrated markets
   
   2. Merger simulation
   3. Documentary evidence
   4. Future competition
The proposed merger will increase concentration in already highly concentrated markets

- Concentration calculated using standard methodology

  "The Agencies often calculate the Herfindahl-Hirschman Index (‘HHI’) of market concentration. The HHI is calculated by summing the squares of the individual firms’ market shares" (Guidelines § 5.3)

- Examples:
  - Monopoly: $HHI = 10,000$
  - 5 equal size firms: $HHI = 2,000$
  - Many very small firms: HHI close to zero
Concentration levels in the Complaint counties meet the thresholds for presumptive harm

- Two thresholds in the Guidelines for presumptive increase of market power
  1. Highly Concentrated Markets (HHI above 2,500)
  2. Increase in the HHI of more than 200 points (ΔHHI)

- Both thresholds are met in the Complaint counties
Both thresholds are met in the Complaint counties

Post-merger HHI and changes in HHI for Complaint counties

- Potential for Significant Competitive Concern (ΔHHI > 200)
- Highly Concentrated (HHI > 2,500)
- Monopoly
Both thresholds are met in Mecklenburg County, NC

Post-merger HHI and change in HHI in Mecklenburg County, NC

- Highly Concentrated (HHI > 2,500)
- Potential for Significant Competitive Concern (ΔHHI > 200)

- Humana: 26%
- Aetna: 22%
- United: 34%
- Other: 18%
Both thresholds are met in Polk County, IA

Post-merger HHI and change in HHI in Polk County, IA

- Potential for Significant Competitive Concern (ΔHHI > 200)
- Highly Concentrated (HHI > 2,500)

Monopoly

- Humana, 18%
- Other, 21%
- Aetna, 61%

Nevo Report, Exhibits 15 and 16, Appendix I
Both thresholds are met in Shawnee County, KS

Post-merger HHI and change in HHI in Shawnee County, KS

- Monopoly
- Highly Concentrated (HHI > 2,500)
- Potential for Significant Competitive Concern (ΔHHI > 200)

- Humana 47%
- Aetna 53%

Nevo Report, Exhibits 15 and 16, Appendix I
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. Concentration measures
2. **Merger simulation**: Prices consistently increase under all models estimated in this matter
3. Documentary evidence
4. Future competition
Use the same merger simulation methodology explained earlier.

“Where sufficient data are available, the Agencies may construct economic models designed to quantify the unilateral price effects resulting from the merger. ... These merger simulation methods need not rely on market definition.” (Guidelines § 6.1)

My merger simulation accounts for any constraints from Original Medicare, with or without supplements.
Measure price through rebate-adjusted premiums

- Reflects
  1. Total premiums, including Part B
  2. Supplemental benefits paid for by CMS

- Closely related to MACVAT measure used by the industry
- Used by academic literature
Prices consistently increase under all estimates in this matter.

Predicted increases in rebate-adjusted premiums

- Using estimates from Nevo Report: 10%, 11%, 19%, 23%, 47%, 55%, 60%, 68%, 74%
- Using estimates from Mr. Orszag’s Report: 10%, 11%, 19%, 23%, 47%, 55%, 60%, 68%, 74%
Likely substantial harm in Complaint counties
  • Rebate-adjusted premiums substantially increase
  • Same qualitative result using Mr. Orszag’s preferred estimates

Based on 2016 enrollment:
  • Seniors: $359 million from increased rebate-adjusted premiums
  • Taxpayers: $145 million from increased CMS payments to insurers
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. Concentration measures
2. Merger simulation
3. **Documentary evidence**: Defendants see each other as close competitors
4. Future competition
Documents demonstrate Humana sees Aetna as a close competitor

Kansas City Landscape
Mature market dominated by Aetna & Humana
Documents demonstrate Aetna sees Humana as a close competitor

Is there a way for us to get market intelligence on what Humana may be doing, vendors they may be utilizing? This may point us in the direction of what we may need to deploy in 2015 to close this gap with our primary MA competitor.
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. Concentration measures
2. Merger simulation
3. Documentary evidence

4. **Future competition**: The proposed merger would eliminate the benefits of future competition between Defendants
Aetna has aggressively expanded in recent years

- Aetna expanded into 640 counties
  - More than twice as many as any other insurer

- Aetna captures and maintains higher share than other entrants

- Aetna is far less likely to exit than other entrants
At the time of the agreement, Aetna’s standalone plan was to continue expanding its MA geographic footprint.

- Aetna’s plan to offer plans to 70 percent of seniors by 2020.
In 2011, Defendants competed in only 79 counties
By 2016, Defendants compete in 675 counties

- Aetna Only
- Humana Only
- Both Aetna and Humana

Map showing states with different competitive landscapes in 2011 and 2016.

Nevo Report, ¶ 220, Exhibit 19
1. The relevant antitrust market is Medicare Advantage (MA) plans sold to individuals within each Complaint county

2. The proposed merger will lessen competition in each Complaint county

3. The potential mitigating factors put forward are insufficient to restore the lost competition
Potential mitigating factors are insufficient to restore the lost competition

1. Lessons from past mergers
2. Entry
3. Divestiture
4. Efficiencies
Potential mitigating factors are insufficient to restore the lost competition

1. Lessons from past mergers:
   1. Divestitures did not succeed in replacing lost competition
   2. Claimed efficiencies did not prevent price increases

2. Entry
3. Divestiture
4. Efficiencies
Humana–Arcadian sheds light on effect of mitigating factors

- **Humana–Arcadian**, March 2012
  - Presumptive harm in 168 counties
  - **Divestitures** in 45 counties

- Can use this merger to study:
  - Were the divestitures successful?
  - Was entry in response to the merger adequate?

- Were price increases prevented by:
  - Mitigating factors?
  - Age-ins?
  - Regulation?
Evaluate the merger relative to a comparison set

• Did prices increase after the merger?
  • Focus on rebate-adjusted premiums
  • Reflect both premiums and additional benefits

• How did the increase compare to a set of comparison counties?
  • Counties in the same state not affected by merger
  • Shared changes would not be due to the merger
After Humana–Arcadian, rebate-adjusted premiums increased.

Despite potential entry, divestitures, any efficiencies, CMS regulation, and age-ins.

Did mitigating factors prevent price increases?
- $22 increase (48 percent) relative to pre-merger.
- $9 increase (20 percent) relative to comparison counties.

Prices increased in presumption counties:
- Effect of merger: $9

Prices in comparison counties:
- $13
After Humana–Arcadian, rebate-adjusted premiums increased.

Despite potential entry, divestitures, any efficiencies, CMS regulation, and age-ins.

Did the divestitures prevent price increases?

- $33 increase (67 percent) relative to pre-merger
- $15 increase (30 percent) relative to comparison counties

Prices increased in divestiture counties:
- $33
- Effect of merger: $15

Prices in comparison counties:
- $18
Humana–Arcadian divestitures did not succeed

- Buyers **exited in 47 percent** of counties by 2016

- **Fraction of enrollees retained** by 2016

<table>
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<tr>
<th></th>
<th>All buyers</th>
<th>Buyers with no prior MA presence in county</th>
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<tbody>
<tr>
<td>Average</td>
<td>48 percent</td>
<td>32 percent</td>
</tr>
<tr>
<td>Median</td>
<td>33 percent</td>
<td>0 percent</td>
</tr>
</tbody>
</table>

- **Molina has no prior MA presence** in divestiture counties
Entry in response to Humana–Arcadian was not likely

- Most presumption counties have experienced **no entry** by 2016
  - Only 33 percent of counties experienced any entry
  - Only 21 percent of counties had entrants that eventually reached **five percent** market share

Nevo Report, ¶ 238; Nevo Reply Report, ¶ 102
Entry in response to Humana–Arcadian was not timely

- In most presumption counties it took at least **three or four years** to experience entry
Entry in response to Humana–Arcadian was not sufficient

• Most presumption counties that experienced entry **still meet the presumption thresholds**
Aetna–Coventry demonstrates limited effect of efficiencies

• Aetna–Coventry, May 2013
  • No divestitures
  • Defendants claim as example of efficiencies

• Can use this merger to study:
  • The effect of claimed efficiencies
• After Aetna–Coventry, the merged firm raised rebate-adjusted premiums
• Despite potential entry, claimed efficiencies, CMS regulation, and age-ins
• Did the efficiencies prevent price increases?
  • $23 increase (69 percent) relative to pre-merger
  • $9 increase (26 percent) relative to comparison counties

Merged firm price increase: $23
Effect of merger: $9
Prices of other competitors: $14
Potential mitigating factors are insufficient to restore the lost competition

1. Lessons from past mergers
2. **Entry**: Entry will not be likely, timely, or sufficient
3. Divestiture
4. Efficiencies
• Plain English definition of entry
  • An insurer enters if it (1) is present in a county in one year (offers MA plans); and (2) was not present in the previous year
• Do not include Aetna and Humana: they are not available to enter

“The prospect of entry into the relevant market will alleviate concerns about adverse competitive effects **only if such entry will deter or counteract any competitive effects** of concern so the merger will not substantially harm customers.”

(Guidelines § 9)

• They have been more successful than other entrants
My conclusions are not affected by using a threshold to define entry

- Analyze entry in two ways:
  1. As defined earlier: present one year and not the prior year
  2. Look only at entrants that eventually exceed five percent share

- Use the actual year of entry when using a threshold

- Analyze entry in the last five years, 2012–2016
Entry into Complaint counties has not been likely

- Entry in only 13 percent of Complaint counties per year

- Even over the last five years, no entry in many Complaint counties
  - Only 47 percent of counties experienced any entry
  - Only 25 percent of counties had entrants that eventually reached five percent market share

Nevo Report, ¶ 253, Exhibit 25; Nevo Reply Report, ¶ 98, Exhibit 14
“Even if the prospect of entry does not deter the competitive effects of concern, post-merger entry may counteract them. This requires that the impact of entrants in the relevant market be rapid enough that customers are not significantly harmed by the merger, despite any anticompetitive harm that occurs prior to the entry.” (Guidelines § 9.1)
Entry will not be *timely*

- Developing a provider network can take **a full year or more**

- If entrants wait for merger-related uncertainty to be resolved, they will not be able to enter **until at least 2019**
• Many MA entrants:
  1. Do not survive
  2. Do not achieve sufficient share to replace the lost competition

• Findings hold:
  • With or without a five percent threshold
  • With multiple entrants
Many entrants leave the market after three years

Percent of all entrants no longer offering plans in 2016

- 2012: 73%
- 2013: 43%

Nevo Report, Exhibit 26
Even brief success does not ensure survival

Percent of entrants who reach five percent share no longer offering plans in 2016

Year of entry

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>51%</td>
</tr>
<tr>
<td>2013</td>
<td>31%</td>
</tr>
</tbody>
</table>

Nevo Reply Report, Exhibit 25 and Backup to Exhibit 25
Most entrants do not achieve sufficient share to replicate the smaller of the Defendants.
Even under generous assumptions, entry will not be sufficient

• Facts:
  • More than half of Complaint counties had no entry in five years
  • What entry took place after Humana–Arcadian took 3–4 years
  • Many entrants do not survive and the median entrant achieves less than one percent market share

• Make generous assumptions to Defendants and compute entry
  • Assign an entrant to every county
  • Assume entry is immediate
  • Assign each entrant market share of 2.7 percent, the average

• Even under these assumptions, 94 percent of Complaint counties still meet presumption thresholds
Potential mitigating factors are insufficient to restore the lost competition

1. Lessons from past mergers
2. Entry
3. **Divestiture**: The potential divestiture will not offset the lost competition
4. Efficiencies
The potential divestiture will not mitigate competitive concerns

• For the potential divestiture to offset the competitive concerns, two things must be true

• The proposed buyer must:
  1. Become a **viable competitor** in the Complaint counties
  2. **Restore the competition** lost between Defendants

• The available evidence demonstrates that these conditions are unlikely to be met by Molina

Merger divestitures can fail to restore lost competition

- Academic literature has studied divestitures that fail

- Studies identify certain features as associated with unsuccessful divestitures:
  - Weak buyers
  - Buyer receives partial or insufficient assets

- The proposed divestiture to Molina suffers from both these flaws
Molina has limited presence and a history of failure in MA
Molina will be inhibited by its lack of brand recognition

Non-Top Five entrants, such as Molina, are more likely to exit within three years than Top Five entrants.

In the 2012 Entry Cohort, 36% of Top Five entrants and 76% of Other entrants exited within three years. In the 2013 Entry Cohort, 18% of Top Five entrants and 48% of Other entrants exited within three years.
Potential mitigating factors are insufficient to restore the lost competition

1. Lessons from past mergers
2. Entry
3. Divestiture
4. **Efficiencies**: Efficiency claims are insufficient to mitigate the lost competition
Efficiency claims are insufficient to mitigate lost competition

• To offset lost competition, efficiencies must be:

  **Merger-specific**
  “The Agencies credit only those efficiencies likely to be accomplished with the **proposed merger** and unlikely to be accomplished in the absence of either the **proposed merger** or another means having comparable anticompetitive effects. These are termed merger-specific efficiencies.” (Guidelines § 10)

  **Verified**
  “Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means.” (Guidelines § 10)

• I understand that **Defendants have not shown** their efficiencies claims to be merger-specific or verifiable
All potential mitigating factors together are still insufficient

- Facts
  - Defendants have not verified efficiencies or shown them to be merger-specific
  - More than half of Complaint counties had no entry in five years; many entrants do not survive and the median entrant achieves less than one percent market share
  - Molina record in MA; median buyer in Humana–Arcadian with no presence failed

- Make generous assumptions to Defendants
  - Half a percent efficiencies
  - Assign an entrant to every county with market share of 2.7 percent, the average
  - Molina retains 33 percent of enrollment received from Defendants

- Even under these favorable assumptions, a merger simulation shows that rebate-adjusted premiums would increase

Prices increase even allowing for potential mitigating factors

- Plans that the merged firm will retain in the Complaint counties increase rebate-adjusted premiums by 15 percent.
1. The relevant antitrust market is Medicare Advantage (MA) plans sold to individuals within each Complaint county.

2. The proposed merger will lessen competition in each Complaint county.

3. The potential mitigating factors put forward are insufficient to restore the lost competition.
Individual commercial insurance
Different sources of insurance for non-seniors

- Employer-sponsored
- Medicaid, Medicare for special needs
- Individual: on-exchange and off-exchange
ACA exchanges provide centralized, standardized marketplaces

- ACA individual mandate
- Four “metal tiers”
- Subsidies for low-income individuals
  - Premiums
  - Cost-sharing
- 700,000 enrollees in the 17 Complaint counties
Assignement on individual commercial insurance

• Asked to analyze the competitive effects of the proposed merger in individual commercial insurance markets as if Aetna had not withdrawn from the 17 Complaint counties

• There is a question as to whether Aetna’s decision was strategically motivated by the proposed merger and this litigation

• Proceed under the assumption that market outcomes in 2016 are informative about the state of competition in future years but-for the proposed merger

• If the merger is blocked, Aetna may decide to re-enter these counties and restore its competition with Humana

• Basic economic theory teaches that firms operate in markets they expect to be profitable

Nevo Report, ¶¶ 266–270
1. The relevant antitrust market is individual commercial health insurance plans sold on the ACA exchanges within each Complaint county.

2. The proposed merger will lessen competition in each Complaint county.

3. Entry and efficiencies would be insufficient to restore the lost competition.
• Counties constitute relevant geographic markets
  • ACA regulations
  • Insurers can offer different plans in different counties
  • Hypothetical monopolist test
Individual commercial insurance plans sold on the ACA exchanges constitute a relevant antitrust product market

1. Market realities
2. Actual customer substitution
3. Academic literature
4. Hypothetical monopolist tests
Subsidies make on-exchange uniquely appealing

- Only on-exchange purchases receive subsidies
- Advance Premium Tax Credit ("APTC")
  - 85 percent of on-exchange customers receive APTC
  - APTC covers at least 10 percent of premium for nearly all who receive them
- Additional cost-sharing subsidies available for low-income customers who buy silver plans on-exchange
• Customers who switch are likely to stay on-exchange
  • HHS study finds that at least 47 percent stayed on-exchange
  • A Humana study finds that 67 percent stayed on-exchange

• Figures likely underestimate substitution
  • HHS study cannot observe changes in eligibility
  • Both studies measure switching out of an insurer
Customer substitution analyzed in academic literature suggests that a **hypothetical monopolist could profitably increase premiums**

- HHS study (2015)
- Tebaldi (2016)
- Dafny et al. (2015)
On-exchange plans pass single-product test

- Allow the hypothetical monopolist to increase the price of one merging party individual commercial plan on an exchange
- A **10 percent SSNIP would be profitable** for at least one plan in **100 percent of counties** for a wide range of margins and measures of customer substitution
1. The relevant antitrust market is individual commercial health insurance plans sold on the ACA exchanges within each Complaint county

2. **The proposed merger will lessen competition in each Complaint county**

3. Entry and efficiencies would be insufficient to restore the lost competition
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. Concentration measures
2. Empirical analysis
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. **Concentration measures**: The proposed merger would increase concentration in already highly concentrated markets.

2. **Empirical analysis**
The proposed merger will increase concentration in already highly concentrated markets.

- Concentration calculated using HHI
- Both Guidelines thresholds are met in all Complaint counties
Both thresholds are met in the Complaint counties.
Multiple sources of evidence demonstrate that the proposed merger will lessen competition in each Complaint county.

1. Concentration measures

2. **Empirical analysis:** The proposed merger will lessen competition and lead to increased prices
   - 1. Literature
   - 2. My estimates
Empirical analysis in the literature shows that the proposed merger would lessen competition in the Complaint counties.

- Empirical analysis in the literature
  - **HHS**: Premiums and premium growth decline when counties experience a net-gain in insurers
  - **Dafny et al.**: Second-lowest silver premiums increase when markets get more concentrated
My analysis shows that higher HHI leads to higher premiums

• A regression of price measures on HHI suggests that an increase in concentration leads to higher premiums

• Average second-lowest silver premiums in Complaint counties would increase by 2.1 percent
Summary of opinions on individual commercial insurance

1. The relevant antitrust market is individual commercial health insurance plans sold on the ACA exchanges within each Complaint county.

2. The proposed merger will lessen competition in each Complaint county.

3. Entry and efficiencies would be insufficient to restore the lost competition.
Entry will not be likely, timely, or sufficient

• **Barriers to entry** suggest that entry will not be likely, timely, or sufficient to offset the effects of the proposed merger
  1. Create a network of low-cost providers
  2. Hire personnel with appropriate experience
  3. Develop necessary information technology infrastructure for enrollment and billing
• The proposed merger would increase monthly average second-lowest silver premiums by **2.1 percent**

• Even taken at face value, the efficiencies claimed by Defendants would lead to no more than **0.71 percent** of savings to consumers
1. The relevant antitrust market is individual commercial health insurance plans sold on the ACA exchanges within each Complaint county

2. The proposed merger will lessen competition in each Complaint county

3. Entry and efficiencies would be insufficient to restore the lost competition
Overall Conclusions

• Opinions:

1. Substantial lessening of competition in markets for Medicare Advantage plans

2. Substantial lessening of competition in markets for Individual Commercial plans

3. Substantial harm to consumers – higher prices and lower benefits
Appendix
The technical disagreement is over instrumental variables

- **Correlation is not causation**
  - Any confounding effects that are not controlled for in a standard regression can bias the estimates
  - Instrumental variables is a method that allows us to deal with this bias

- Instrumental variables are about bringing in new information

- The new information needs to be
  - Unrelated to the confounding factors
  - Related to the variable of interest
The instruments in my models are valid and vary within county

• The information I use: the identity of competitors
  • Common approach in the academic literature (Berry, Levinsohn, Pakes)
  • Used by the academic papers I discussed earlier
  • Identity of competitors is related to prices and within segment share
  • Identity has more information than just number of competitors

• I use information from the service area and not just the county
  • Using information from other areas is common (Hausman, Nevo)
  • Used by the academic papers I discussed earlier
  • Brings in more information
  • Guards against confounding factors at the county level