UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA et al.,

Plaintiffs,

v.

CVS HEALTH CORPORATION

and

AETNA INC.,

Defendants.

Case No. 1:18-cv-02340-RJL

UNITED STATES' WITNESS LIST AND REQUEST FOR CLARIFICATION OF PROCEDURES FOR TUNNEY ACT HEARING

In response to the Court's April 8, 2019 Order, the United States provides the following list of witnesses it proposes to call at any upcoming Tunney Act hearing.¹ The witnesses will be prepared to provide further evidence that the proposed Final Judgment is in the public interest because the proposed judgment reasonably addresses the violations alleged in the Complaint. As detailed in the United States' previous filings (*see*, *e.g.*, Dkts # 3, 32, and 56), to meet this standard, the United States must only show that the proposed final judgment is a "reasonably adequate remed[y] for the alleged harm," and is therefore in the public interest. *See United States v. Iron Mountain, Inc.*, 217 F. Supp. 3d 146, 152-53 (D.D.C. 2016). The witnesses'

¹ The United States interprets the Court's order to allow the plaintiffs to offer three witnesses, combined, and the defendants to offer three witnesses, combined, but recognizes there may be potential ambiguity in the Order about what the Court meant by "combined." If the Court instead meant to limit plaintiffs and defendants to a total of three witnesses among them, the United States requests a modification of the April 8, 2019 Order to allow the United States, CVS, and Aetna to call all five of their designated witnesses. The United States has streamlined its planned testimony as much as possible; accordingly, failure to make such a modification, if needed, could unfairly prejudice the United States' ability to rebut the seven witnesses that the Court-approved amici intend to present to the Court.

testimony will further corroborate that the proposed Final Judgment satisfies the public-interest standard by providing comprehensive relief that provides WellCare with the assets and scale necessary to maintain competition in the 16 geographic regions identified in the Complaint.

Since the Court issued its Order, the United States has filed two motions to help prepare for any such hearing: On April 18, the United States moved the Court to incorporate the Tunney Act materials as part of the evidentiary record. Dkt. #73. On April 29, the United States moved the Court to limit the scope of the hearing and exclude irrelevant and undisclosed testimony. Dkt. #82.

The first filing is consistent with the Court's Order that the United States may "rebut" amici's evidence at the hearing, as well as the United States' understanding of the appropriate scope of Tunney Act proceedings. As explained in the filing, the Court can and should accept the Tunney Act Materials as evidence that (1) the United States has complied with all Tunney Act procedural requirements and (2) the proposed final judgment reasonably remedies the violations in the Complaint in a manner consistent with the public interest. Should amici put forward evidence suggesting otherwise, the United States may rebut that showing, if necessary, at the hearing.

The second filing explains that any hearing should be limited to evidence and arguments addressing whether the proposed decree is consistent with the public interest as a remedy for the violations alleged in the Complaint, and that amici should be limited to arguments for which they have provided sufficient notice.

If the Court denies these motions, the United States requests notice of at least three weeks following any additional submissions from amici or clarifications from the Court to allow it to have an adequate opportunity to prepare and supplement its witness list as necessary.

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The United States also requests three weeks' notice of—and an opportunity to be heard

on—any issues the Court deems relevant to its public-interest determination that are beyond

amici's previously identified challenges to the adequacy of the remedy in the proposed consent

judgment. If the Court denies the United States' motions or does not allow supplemental

witnesses if necessary, it would unfairly prejudice the United States by forcing it to prepare for a

hearing without proper notice of the scope of the hearing or the context in which the Court

intends to evaluate the evidence presented.

In addition, the United States requests that the Court allow it to provide a short opening

statement and closing argument of 20 minutes each. Allowing a short opening statement and

closing argument would enable the United States to frame the relevant issues before the Court

and put the witness testimony in context.²

Witnesses

Fact Witness: Michael Radu

Knowledge and Expertise

Michael Radu is the Executive Vice President of Clinical Operations and Business

Development for WellCare. In his current role, Mr. Radu leads WellCare's clinical services

operations and pharmacy relationships. Mr. Radu's responsibilities include profit-and-loss

responsibility for WellCare's individual PDP business throughout the United States. Before his

current role, Mr. Radu had 25 years of experience in the managed-care industry, including work

related to Medicaid and Medicare health plan management.

² The United States has consulted with counsel for CVS, who does not oppose the requests for clarification.

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Mr. Radu holds a bachelor's degree in psychology from the University of California, Los Angeles and an MBA from the University of Southern California Marshall School of Business.

Mr. Radu's resume is attached as Exhibit A.

Proposed Testimony

This section describes the topics about which Mr. Radu is prepared to testify, and is limited to topics that rebut the testimony that amici proposed to offer in their filings of April 19 or other previously disclosed materials. This representation regarding Mr. Radu's ability to testify to these topics is not intended to alter in any way the United States' position that the scope of the proposed evidentiary hearing should be limited as described in its pending motions.

Due to his position and responsibilities at WellCare, Mr. Radu is familiar with WellCare's individual PDP business, including the competition it faces, WellCare's decision to purchase Aetna's individual PDP assets, and WellCare's integration of those assets. Mr. Radu is prepared to testify that WellCare is familiar with the individual PDP market and has been a competitor in individual PDP since the program's inception in 2006, and that the divestiture assets will likely enable WellCare to maintain and even improve its competitive offerings in the marketplace. Mr. Radu is further prepared to testify that WellCare has experience successfully integrating individual PDP assets, that the divestiture assets include what WellCare needs to keep the assets competitive, and that the Aetna data received during the divestiture augments and complements the nationwide infrastructure already possessed by WellCare.

With respect to the divestiture purchase price, Mr. Radu is prepared to testify that WellCare undertook its own analysis of Aetna's individual PDP business, that WellCare's bid for the divestiture assets reflects the reasonable value of the assets under the circumstances of the divestiture. Mr. Radu will also testify that WellCare made an independent decision to contract

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with Caremark, CVS's pharmacy benefit manager ("PBM"), that this decision was in the best

financial interest of WellCare, that WellCare is putting its PBM services contract out for bid in

the near future, and that WellCare has competitive options for the PBM and retail pharmacy

services that it requires.

In addition to the testimony described above, the United States, subject to its pending

motions, reserves the right to call Mr. Radu to rebut any other testimony or evidence entered into

the record by amici's witnesses.

Approximate Length of Testimony

Two hours.

Fact Witness: Terri Swanson

The United States understands that CVS intends to designate Terri Swanson, the Vice

President of Medicare Product and Part D business at Aetna, as a witness. The United States

hereby cross-designates Ms. Swanson as a witness for the same proposed testimony detailed in

CVS's witness list.

Approximate Length of Testimony

One hour.

Expert Witness: Dr. Nicholas Hill

Knowledge and Expertise

Dr. Nicholas Hill is an expert in antitrust economics in a number of industries, including

healthcare. He has provided economic analysis in a wide range of antitrust healthcare matters

involving hospitals, health insurers, and pharmaceutical companies. Dr. Hill spent 2006-2017 in

government service, including time as an assistant section chief in the Economic Analysis Group

at the Antitrust Division of the Department of Justice and as an economist in the Bureau of

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Economics at the Federal Trade Commission. At the Antitrust Division, he received the U.S. Attorney General's Award for Distinguished Service. He is currently a partner at the Bates White Economic Consulting Group and has a PhD in Economics from Johns Hopkins University where he was a visiting professor in the fall of 2007. He also has a bachelor of arts in economics and international studies and a masters in science (MSc) in quantitative development economics from the University of Warwick.

During his time at the Department of Justice and the Federal Trade Commission, Dr. Hill provided economic analysis in a number of healthcare matters. He also analyzed over 20 proposed divestitures in a variety of industries and provided a written declaration in a prior Tunney Act proceeding. A copy of Dr. Hill's CV is attached as Exhibit B.

Proposed Testimony

This section describes the topics about which Dr. Hill is prepared to testify, and is limited to topics that rebut the testimony that amici proposed to offer in their filings of April 19 or other previously disclosed materials. This representation regarding Dr. Hill's ability to testify to these topics is not intended to alter in any way the United States' position that the scope of the proposed evidentiary hearing should be limited as described in its pending motions. The United States continues to maintain that experts should have to disclose their analyses and sources prior to any hearing, and with sufficient time for the other side to prepare. If the Court disagrees and allows amici's expert witnesses to testify based on the material currently not in the record, then Dr. Hill should also be allowed to testify to expert opinions, or rely on materials, not described in this filing.

Dr. Hill is prepared to testify about competition and consumer welfare in the sale of individual PDPs. He can interpret public information about individual PDP markets, including

enrollment³ and financial data,⁴ and can testify to the likelihood of various outcomes from the proposed divestiture from Aetna to WellCare. Dr. Hill's testimony will specifically rebut three arguments contained in amici's filings.

First, Dr. Hill is prepared to testify that, based on an economic analysis of the proposed remedy, the divestiture to WellCare is likely to maintain the competitiveness of individual PDP markets. Relying on public enrollment data as well as interviews with and testimony from Mike Radu, a WellCare executive listed above, Dr. Hill can testify that WellCare is an experienced competitor for individual PDPs. Relying on this same information, Dr. Hill can testify that the divestiture will likely maintain the level of pre-merger competition in the relevant markets. Dr. Hill can also testify that the divestiture will strengthen WellCare by increasing its scale and providing it with data, contracts, and expertise that will enable it to take advantage of that increased scale.

Dr. Hill can also testify that WellCare's past experience, including its 2013 acquisition of Windsor Health Group, demonstrates its ability to successfully integrate individual PDP plans and that publicly available enrollment data shows that WellCare successfully retained most of the Windsor enrollment during the years following the acquisition.

Relying on his experience as an antitrust economist who was involved in over 20 remedies as well as a review of the economic literature on this subject, Dr. Hill can also testify that the divestiture to WellCare is made to a qualified buyer and includes all necessary assets and is therefore likely to preserve competition. Dr. Hill can testify that WellCare has been an active

³ Available at: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/Monthly-Enrollment-by-Contract-Plan-State-County html and https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/index.html .

⁴ Available at: https://www.cms.gov/Medicare/Medicare-Advantage/Plan-Payment/Downloads/CY2014-MLR-Data-Release-File.zip.

participant in individual PDP markets since their inception in 2006; that WellCare already has pharmacy networks throughout the United States; that the divestiture includes Aetna's entire individual PDP business; and that WellCare has received a valuable set of data and expertise through the divestiture.

Dr. Hill is prepared to address any claim that the WellCare divestiture is in any way similar—from the perspective of antitrust economic analysis—to the proposed divestiture to Molina in the *Aetna/Humana* case. Based on publicly available information in the *Aetna/Humana* trial record, Dr. Hill is prepared to contrast the robust divestiture in this matter with the rejected remedy in *Aetna/Humana*. Dr. Hill can testify that Molina (the proposed buyer in *Aetna/Humana*) had tried, and failed, to enter the relevant markets; that Molina had no presence, and hence no provider networks, in any states in which lives were to be divested; that Molina would not have received an entire line of business; and that Molina would not have received access to a comprehensive set of data or staff through the divestiture. Similarly, based on publicly available information in WellCare's corporate filings and the *Humana/Arcadian* record, Dr. Hill is prepared to testify that the divestiture in *Humana/Arcadian* is not comparable to the proposed divestiture in this matter, as the *Humana/Arcadian* divestiture was not a complete line of business and was sold to buyers without provider networks in many of the markets where the assets were acquired.

Dr. Hill could also testify that the purchase price of the divestiture in this case is not dispositive as to the assets' future competitive significance, as the pool of potential buyers of the divestiture assets was necessarily limited because of the stringent standards that antitrust enforcement agencies impose on buyers.

⁵ See United States v. Aetna, Inc., 240 F. Supp. 3d 1, 73 (D.D.C. 2017).

⁶ See United States v. Humana, Inc., 1:12-cv-00464 (D.D.C. March 27, 2012).

Second, Dr. Hill is prepared to rebut amici's arguments that the divestiture of Aetna's individual PDP business to WellCare will create competitive issues of its own accord. Relying on public enrollment data, Dr. Hill can testify that, while the combination of WellCare and Aetna does result in HHIs in several Medicare regions that "potentially raise significant competitive concerns" relative to premerger levels, moderate concentration levels alone often do not lead to anticompetitive effects. Relying on the same enrollment data, Dr. Hill will testify that other features of the individual PDP markets, including competition from other competitors such as Humana, CVS, and UnitedHealth, and the fact that WellCare's share was small in many individual PDP markets, do not fuel concerns related to a combination of WellCare and Aetna. Dr. Hill can also testify that other market participants such as Express Scripts had similar market profiles to WellCare and that Rite-Aid's EnvisionRx is a growing individual PDP participant, further undermining any concern regarding the elimination of WellCare as an independent competitor.

Third, Dr. Hill is prepared to testify that WellCare is unlikely to be subject to vertical foreclosure following the divestiture. Relying on publicly available enrollment data, the allegations in the Complaint, Dkt. #1, and interviews with and testimony from Terri Swanson, an Aetna executive, Dr. Hill can testify that Aetna was a strong competitor to CVS and that there is no evidence that it was foreclosed prior to the acquisition. Dr. Hill can then testify to several flaws in the numerical assessment of the profitability of foreclosure described by Dr. Sood as indicating a probability of foreclosure. Using publicly available enrollment and industry financial data, Dr. Hill can then testify to a properly formulated assessment of the profitability of foreclosure, which shows CVS has no meaningful economic incentive to foreclose WellCare from its PBM services. Based on past examples of behavior in retail pharmacy markets, Dr. Hill

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can also testify that CVS would face significant financial losses if it were to foreclose WellCare

from its retail pharmacies.

In addition to the testimony described above, the United States, subject to its pending

motions, reserves the right to call Dr. Hill to rebut any other testimony, analysis, or evidence

entered into the record by amici's witnesses, including the structure, conduct, performance

analysis suggested by Dr. Sood's proposed testimony.

Approximate Length of Testimony

Four hours.

Dated: May 3, 2019

Respectfully submitted,

/s/

Jay D. Owen

U.S. Department of Justice

Antitrust Division

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CERTIFICATE OF SERVICE

I, Jay D. Owen, hereby certify that on May 3, 2019, I caused a copy of the foregoing document to be served upon Plaintiffs State of California, State of Florida, State of Hawaii, State of Washington, and Defendants CVS Health Corporation and Aetna Inc., via the Court's CM/ECF system, and to be served upon Plaintiff State of Mississippi by mailing the document electronically to its duly authorized legal representative:

Counsel for State of Mississippi:

cutle@ago.state.ms.us

Crystal Utley Secoy Consumer Protection Division Mississippi Attorney General's Office P.O. Box 22947 Jackson, Mississippi 39225 Phone: (601) 359-4213

/s/

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Michael P. Radu

PROFESSIONAL EXPERIENCE

WELLCARE, 2015 - Current

Executive Vice President, Clinical Operations and Business Development, Tampa, FL

Executive officer and part of the leadership team that led a turnaround in a Fortune 500 health plan with \$27B in revenue (up from \$14B) serving 5.3 million Medicare, Medicaid members in 21 states and national PDPs.

Responsibilities include advancing the Company's growth strategy through leading the Company's Medicaid organic business development to expand the membership, benefits and geography of WellCare's health plans. Additionally, responsible for the P&L of WellCare's national Part D health plans, soon to be the 4th largest, currently serving close to 4 million members in all 50 states. The duties also include leading clinical and quality operations that yield material revenue improvement from Medicare STARs, Medicaid quality incentives and Medicare/Medicaid risk adjustment. Also, run PBM operations and P&L serving 1.6 million lives and an exchange health plan. Finally, created the first Company-wide Innovation Office to advance capability development, new products and strategic partnerships.

Success includes:

- Secured additional revenue from expanding Medicaid contracts into new geographies, adding new benefits
 and serving new chronically ill members, such as long-term care seniors, medically fragile children and
 seriously mentally ill adults. Responsible for expansion into North Carolina, one of the largest new Medicaid
 managed care RFPs in years.
- Exceeded Part D health plan profitability targets for each of the last 3 years including developing innovative Medicare Part D bid strategies and improving core operations and compliance. Championed the purchase of Aetna's divested Part D assets.
- Led a company-wide transformational quality initiative for Medicare and Medicaid that improved every area of the Company's performance including operations, product, member engagement, clinical results, member satisfaction, provider engagement and pharmacy. Results yielded the Company's first ever Medicare STARs score at 4.5 STAR (currently at over 43 percent of members in 4 STAR plans up from zero in 2015).
- Led all utilization management, care management, and behavioral health teams nationally that delivered on clinical savings initiatives exceeding hundreds of millions of dollars annually surpassing goals for 3 years.
 Programs included launching localized, field care management program nationally, advancing Medicare revenue accuracy programs, and hospital admission reductions of 18 percent. This success necessitated developing and deploying a propriety new utilization management clinical platform serving 4,000 associates.
- Improved employee satisfaction from 71 to 79 points while yielding turnover better than every other area and less than half the company average. Increased leadership bench strength significantly.

HEALTH ESSENTIALS, 2013 - 2015

Chief Executive Officer, Santa Ana, CA

Led a medical group, hospice and palliative care organization serving high risk Medicare and Medicaid patients through end of life wherever they reside. The Company served 2,500 high risk patients in California, Arizona and Nevada mostly under shared risk or capitation contracts, and employed over 600 associates including 50 physicians and nurse practitioners. The position held P&L responsibility for \$75 million annual revenue and responsibility for all aspects of the Company including culture, strategy, operations, board management, sales, field and support functions. Key businesses of the company included:

- A multi-state hospice organization with approximately 1,200 ongoing census covering Southern California, Las Vegas, and Tucson
- The premier nursing home based primary care medical group (SNFist) covering 300 nursing homes in Southern California and Las Vegas, and
- An innovative physician and nurse practioner home-based care team for high risk and home bound patients in Southern California and Tucson.

Michael P. Radu Page 2

UNITEDHEALTH GROUP, 2001 - 2013

Chief Operating Officer, OptumCare, Optum Reston, VA

2011 - 2013

Part of the founding management team that created a physician medical group division within Optum, a wholly owned subsidiary of UnitedHealth Group, operating high performing networks, IPAs, ACOs as well as employed medical group practices. The division served over 1.1 million individuals through bundled payment and capitation in 8 states and 20 markets with over 3,500 employees and 450 employed physicians.

Responsibilities included P&L accountability for all markets representing close to \$4 billion in annual revenue. In addition, the position led development of corporate IPA and medical group functions such as practice management operations, sales/marketing, network development, medical management, quality and Medicare coding, claims, call center, new market development and provided oversight of all other matrix functions.

President, Southeast Region, UnitedHealthcare Reston, VA

2007 - 2011

Part of management team that led profitability and growth turnaround of Unitedhealthcare's Medicaid division growing from \$4B to \$12B began exceeding profit targets in 2008, the first in 6 years. Responsibilities included leading the P&L of Medicaid, and Medicare health plans in 6 states serving 1 million members and \$4 billion of revenue with supervision of 650 employees representing utilization management, care management, provider relations, marketing/sales, quality, and operations.

Senior Vice President, State Public Affairs, Medicare, Washington, D.C.

2004 - 2007

Responsible for all state policy and public affairs issues for UHC's Medicare division related to Medicare, Medicaid long term care and health care technology including the interplay of federal programs on state policy. In addition, the position required working with business owners to achieve new market development (often through procurement) and enhance program revenue.

Senior Vice President, Business Development, Evercare, Phoenix, AZ

2002 - 2004

A member of Evercare's senior management team, an organization dedicated to serving chronically ill individuals through Medicaid and Medicare. Responsibilities included developing new market opportunities for complex populations and securing the Company's participation.

Regional Vice President, Health Plans, Phoenix AZ

2001 - 2002

Operational and P&L responsibility for 4 states representing Medicaid and Medicare health plans serving approximately 50,000 chronically ill beneficiaries and generating almost \$300 million in annual revenue.

LIFEMARK CORPORATION (purchased by UnitedHealth Group), 1997 - 2001

<u>Regional Vice President, Health Plans:</u> P&L responsibility for 4 states representing at-risk and ASO Medicaid contracts serving over 400,000 members

<u>Lifemark Plan President:</u> Managed the Company's innovative, Medicaid Arizona long term care health plan program serving 2,500 high risk, aged and disabled individuals in 8 counties.

<u>Lovelace Plan President</u>, Managed statewide Medicaid health plan serving 40,000 TANF and CHIP individuals as part of an administrative services agreement for a Cigna subsidiary, Lovelace Health Plan.

FPA MEDICAL MANAGEMENT, 1996 – 1997 <u>Administrator, Thomas-Davis Medical Group</u>: As part of a national practice management platform, managed a multi-specialty medical group with approximately 50 physicians and 240 staff members through 6 locations.

FHP HEALTH CARE, 1989 – 1996 <u>Administrator, Talbert Medical Group,</u> Managed all aspects of a multi-site, primary care practice with approximately 15 physicians and 100 staff including P&L, marketing, human resources and general administration. And, served in various other corporate functional roles.

EDUCATION



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NICHOLAS D. HILL, PHD

Partner

AREAS OF EXPERTISE

- Banking
- Chemicals
- Health care
- Pulp and paper
- Software
- Telecommunications



SUMMARY OF EXPERIENCE

Nicholas Hill has served as an economic expert for private clients, the Department of Justice, and the Federal Trade Commission. He has testified in federal court and the Federal Trade Commission's administrative court. He developed the capacity closure model, which is often used to analyze mergers in commodity industries. Prior to joining Bates White, Dr. Hill served as assistant section chief in the Economic Analysis Group of the Department of Justice's Antitrust Division, where he received the US Attorney General's Award for Distinguished Service, and was an economist in the Bureau of Economics at the Federal Trade Commission.

EDUCATION

- · PhD, Economics, Johns Hopkins University
- MSc, Quantitative Development Economics, University of Warwick
- BA, Economics and International Studies, University of Warwick

PROFESSIONAL EXPERIENCE

- Bates White Economic Consulting, Washington, DC
 - Partner, 2018–present
 - Principal, 2017–2018
- Department of Justice
 - Assistant Section Chief, Antitrust Division, 2014–2017
 - Economist, Antitrust Division, 2006–2013
- Federal Trade Commission, Economist, Bureau of Economics, 2013–2014
- Johns Hopkins University, Visiting Professor, Fall 2007
 - Microeconomic Theory I

SELECTED EXPERIENCE

AGRICULTURE

- Retained in 2019 by a private client to provide analysis and testimony about an alleged agricultural output withholding conspiracy.
- Analyzed fluid milk and school milk competition in the Antitrust Division's litigation to undo Dean Foods'
 acquisition of the Foremost Farm milk-processing assets. Key contributions included writing a series of
 memos that helped develop the theory of harm and analyzing when and how any efficiencies created by the
 deal would be passed through to consumers.

CHEMICALS

- Testified in two courts 2018 on behalf of the Federal Trade Commission in the agency's litigation over the
 proposed merger between Tronox and Cristal, two leading suppliers of chloride process titanium dioxide.
 Provided key market definition analysis and modeled the likely unilateral and coordinated effects of the
 merger. The FTC prevailed in both courts.
- Led the analysis of economic issues on the proposed merger of Halliburton and Baker Hughes. This sprawling matter included a massive number of product markets, each of which had a unique story.

CONSUMER PRODUCTS

- Analyzed competition on three separate Antitrust Division investigations in the beer industry: Miller-Coors, InBev-Anheuser Busch, and ABI-Grupo Modelo. The InBev-Anheuser Busch matter led to the divestiture of the Labatt's brand despite the fact that Labatt's national market share was miniscule, a recognition of the economic evidence that beer markets are local (Labatt's was popular in parts of upstate New York). Similarly, economic analysis supported the divestiture of the Grupo Modelo brands in the United States, and this was the outcome of the matter.
- Provided economic analysis of competition in the sliced bread market for the Antitrust Division's investigation
 of the merger between Grupo Bimbo and Sara Lee Bakery Group. The transaction raised concerns about a
 reduction in competition to supply sliced bread to retailers in eight geographic markets in the United States.
 Much of the concern focused on wide-pan breads. The transaction was approved conditional on divestiture of
 brands in local geographic markets.
- Prepared declaration for the FTC analyzing the proposed merger between Jostens and American
 Achievement Corporation, two of the three largest makers of high school and college class rings. The
 Commission issued a complaint seeking to block the merger, charging that the proposed merger would likely
 be anticompetitive and lead to higher prices and reduced service. The parties abandoned their merger plans.
- Analyzed funeral home and cemetery competition in dozens of markets around the country as part of the
 FTC's investigation of SCI's acquisition of Stewart Enterprises. Developed a simple tool for measuring funeral
 home concentration. This tool helped narrow the focus of the investigation to areas in which the merger would
 likely reduce competition. Worked closely with the parties to negotiate the divestitures that would be required
 to mitigate the transaction's likely competitive effect.
- Provided economic analysis on the FTC's investigation of Pinnacle's acquisition of Ameristar's casinos. Wrote
 a memo that tackled key market definition issues and provided answers using simple econometric tools.
 Summarized the economic aspects of the investigation before the full Commission.

HEALTHCARE

- Provided an antitrust risk assessment in 2018 to a major hospital system considering whether to submit a bid to acquire another hospital system.
- Managed the economics team on the Antitrust Division's successful litigation to block the proposed merger between Aetna and Humana. Helped prepare the testimony and reports of the Division's economic, industry, divestiture, and efficiencies experts.
- Analyzed the acquisition by Novartis of GSK's oncology drugs and GSK's acquisition of Novartis's vaccine division (excluding influenza assets) for the Federal Trade Commission. Novartis agreed to divest its BRAK and MEK inhibitors assets to secure FTC approval of the deal. At the time of the transaction, GSK marketed a BRAK inhibitor, a MEK inhibitor, and a combination therapy, all of which were used to treat late-stage melanoma. Novartis had BRAK and MEK inhibitors, as well as a combination therapy, at a late-stage of development. GSK's acquisition of Novartis vaccine assets was approved without condition.
- Provided economic analysis for the FTC of Sun Pharmaceutical's acquisition of Ranbaxy Laboratories. Both
 firms manufactured generic drugs for sale in the United States. Sun agreed to divest Ranbaxy's generic
 minocycline business to insure approval of the deal by the Federal Trade Commission. The case turned on
 future competition: Ranbaxy provided various strength minocycline tablets and Sun was a likely future
 producer.
- Provided economic analysis to Antitrust Division investigations of Blue Cross Blue Shield's acquisition of M-Care, the University of Michigan's health insurance business, and Main Line Health's acquisition of the Riddle Health System. Both deals were approved without condition.

MEDIA

- Retained by Pandora in 2018 to provide economic analysis related to its acquisition by Sirius XM. The
 analysis focused on issues of cross-ownership. The Antitrust Division approved the merger without issuing a
 second request.
- Analyzed the proposed merger of two newspapers on behalf of the Antitrust Division in 2017. The merger was abandoned by the parties and the target was instead acquired by a third party.

PULP AND PAPER

- Retained by KapStone Paper and Packaging Corporation to provide analysis of the likely competitive impact
 of its proposed merger with WestRock. Provided economic analysis to Antitrust Division staff showing that the
 merger was unlikely to significantly reduce competition to produce kraft paper, in part because of vigorous
 competition from plastic alternatives. The merger closed without conditions in 2018.
- Provided economic analysis for the Antitrust Division on three separate paper mergers: Abitibi-Bowater,
 Graphic Packaging-Altivity, and International Paper-Temple Inland. In the course of these investigations,
 developed the capacity closure merger simulation tool. It weighs a dominant firm's incentive to increase price
 by closing mills (i.e., the additional margin it can earn on its mills that remain open) against the cost of such
 closures (i.e., lost profits at the closed mills). The model requires only data that are commonly available in the
 paper industry and can easily accommodate the effect of efficiencies and competitor supply responses.
- Oversaw the Antitrust Division's economic analysis of Weyerhaeuser's sale of fluff pulp mills to International Paper. The investigation closed without conditions.

RETAIL BANKING

- Retained by First Financial and MainSource in 2017 to provide competitive analysis in conjunction with their proposed merger. Analyzed small business lending overlaps in counties in Indiana, among other issues, and presented findings to the Antitrust Division. The merger closed successfully with limited divestitures.
- Led the economic analysis of all banking matters before the Antitrust Division while an Assistant Section Chief, including the mergers of Huntington-First Merit and KeyCorp-First Niagara, among others. Also oversaw the economic analysis of the merger between two subprime lenders Springleaf and OneMain.

SOFTWARE

- Retained by a private client to analyze its proposed acquisition of a firm that provided software solutions to healthcare providers. The merger closed without condition in 2019.
- Retained in 2018 by a private client to provide an antitrust risk assessment of a potential acquisition.
- Led the Antitrust Division's economic analysis of Change Healthcare's 2017 acquisition of McKesson's claim
 processing assets. Change had a significant presence among payers, while McKesson had a strong position
 among providers. The transaction closed without conditions.
- Spearheaded the economic analysis on the Antitrust Division's investigation of Nuance's acquisition of Loquendo. Both firms had developed speech-to-text software that were used in a variety of applications. The merger was approved without conditions.

TELECOM

- Managed the economics team on the Antitrust Division's investigation into the proposed merger between
 Comcast and Time Warner Cable. A key area of focus was how increasing the size of an MVPD affects the
 fees that it pays to programmers. The team used a combination of empirical and theoretical analysis to
 answer this question and to answer the related question of whether large Internet Service Providers (ISPs)
 can charge higher interconnection fees than smaller ISPs.
- Oversaw the Antitrust Division's economic analysis on its investigation into the Charter-Time Warner Cable and Century Link-Level3 mergers. Both mergers were approved with conditions.
- Supervised the economic analysis on the Antitrust Division's investigation of the merger between ARRIS and Pace, two prominent makers of set-top boxes. The merger was approved without conditions.

TRANSPORTATION

- Retained in 2017 by Siemens and Alstom, two global railroad industry firms, to analyze the likely competitive
 impact in the United States and Canada of their proposed merger. The team extensively supplemented
 existing CRM data using publicly available information and then used the resulting database to demonstrate
 that competition in a key segment at issue would likely not be affected by the proposed merger. The Antitrust
 Division of the DOJ excluded the segment from its second request.
- Oversaw the economic analysis of the Antitrust Division's litigation to block the proposed sale of slots at Newark Airport from Delta to United. The economic team used empirical analysis to support the proposed market definition (which defined Newark Airport as a separate geographic market), to measure the likely competitive effects, and to evaluate the parties' efficiency claims.

 Oversaw the Antitrust Division's economic analysis on a number of matters involving cranes, trailers, and trucks. On Ritchie Brothers' acquisition of IronPlanet, this included wrestling with the extent to which different selling mechanisms compete with one another, specifically, online auctions and physical auctions. Product and geographic market issues, meanwhile, took center stage in Big Tex's acquisition of fellow trailer manufacturer ATW. Finally, Konecranes acquisition of Terex's MHPS business focused on port cranes.

TESTIMONY, DECLARATIONS, AND EXPERT REPORTS

- Federal Trade Commission v. Tronox Limited et al.
 - 1:18-cv-01622-TNM (D.D.C. Sept. 12, 2018): Testimony and expert report, 2018.
 - FTC Matter/File No. 171 0085, Docket 9377: Testimony, 2018.
- US Department of Justice, Antitrust Division. Newspaper matter. Expert witness, 2017.
- Federal Trade Commission. Jewelry industry matter. Expert witness, 2014.
- United States v. Abitibi Consolidated, Inc., 584 F. Supp. 2d 161 (D.D.C. 2008). Declaration, August 2008.

PUBLICATIONS

- "Is 5-to-4 the New 4-to-3? A View from the United States" (with Keith Waehrer) Competition Law and Policy Debate 5 (2019): Forthcoming.
- "Aetna-Humana and Algorithmic Market Definition in the Guidelines." (With Kostis Hatzitaskos and Brad T. Howells) Antitrust Source. October 2017. (Nominated for Best Business Article, Mergers category, 2018 Antitrust Writing Awards)
- "Racial Bias and Networking in Employment Outcomes: Evidence from NBA Coaches." (With Marc Remer) Working Paper. October 2017.
- "Economics at the Antitrust Division 2014–2015. Comcast/Time Warner Cable and Applied Materials/Tokyo Electron." (With Nancy Rose and Tor Winston) *Review of Industrial Organization* 47 (2015): 425–35.
- "The Year in Review: Economics at the Antitrust Division, 2007–2008." (With Ken Heyer) *Review of Industrial Organization* 33 (2008): 247–62.
- "Analyzing Mergers Using Capacity Closures." EAG Discussion Paper Series 08-8 (2008). Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1262317.

RECENT PRESENTATIONS AND PANELS

- "Fundamentals of Economics," Panelist, 2019 ABA Antitrust Law Spring Meeting, March 27, 2019
- "Effective Engagement: Working with the Government." Panelist, 2018 ABA Antitrust Law Spring Meeting, April 12, 2018
- "Antitrust and the Payer-Provider Relationship: Do I Need to Care about This?" Panelist, American Health Lawyers Association webcast, October 26, 2017
- "Natural Experiments in Merger Analysis." Hal White Antitrust Conference, June 2016
- "Fundamentals of Economics." Panelist, ABA Spring Meeting, Section of Antitrust Law, April 2016

- "Economic Issues Raised in the Comcast-Time Warner Cable Merger." Panelist, ABA Section of Antitrust Law, February 2016
- "Mergers that Enhance Purchasing Clout—Current Thinking on Monopsony and Bargaining Power." Capitol Forum Future of Broadband Conference, 2015
- "The Economics of Efficiencies." Antitrust Economics for Young (and Old) Lawyers, FCLI, 2015.
- Hoover IP Squared Conference. Discussant, 2015
- "US Antitrust Law Fundamentals for Chinese Practitioners Series: Basic Economics for Antitrust Lawyers."
 Panelist, ABA, 2013
- Panelist, Fordham Competition Law Institute Course for Agency Economists, 2012
- Joint DOJ-FTC Data Usage Workshop, 2011
- DOJ Merger Guidelines Market Definition Training, 2011
- DOJ-EU-FTC Antitrust Workshop, 2011

HONORS AND AWARDS

- US Attorney General's Award for Distinguished Service, 2017, Aetna-Humana
- Antitrust Division Award of Distinction, 2016, United–Delta Newark Slots
- Antitrust Division Award of Distinction, 2016, Halliburton–Baker Hughes
- Antitrust Division Award of Distinction, 2015, Comcast–Time Warner Cable
- FTC Certificate of Appreciation, 2014, Expert Witness on jewelry industry matter
- Best work by an EAG Staff Economist, Department of Justice: Written work, 2009–2010
- Best support by an EAG Staff Economist, Department of Justice: Litigation, 2008–2009
- Best work by an EAG Staff Economist, Department of Justice: Theory, 2007–2008