A Profile of Bio-Pharma Consolidation Activity

Jordan Paradise
Loyola University Chicago, School of Law, jparadise@luc.edu

Follow this and additional works at: https://lawecommons.luc.edu/facpubs
Part of the Antitrust and Trade Regulation Commons, Food and Drug Law Commons, Health Law and Policy Commons, and the Organizations Law Commons

Recommended Citation

This Article is brought to you for free and open access by LAW eCommons. It has been accepted for inclusion in Faculty Publications & Other Works by an authorized administrator of LAW eCommons. For more information, please contact law-library@luc.edu.
A Profile of Bio-pharma Consolidation Activity

Jordan Paradise, J.D. *

INTRODUCTION

The bio-pharmaceutical sector is no stranger to consolidation. Over the last three decades, over 110 companies have consolidated to approximately thirty. Notably, the rate and extent of bio-pharmaceutical consolidation has measurably accelerated in recent years with projections of a similar pace into the near future. Ernst & Young reports that bio-pharmaceutical deals reached a ten-year high in 2014, when pharmaceutical companies acquired twenty-seven biotech companies—a 46 percent increase over 2013 numbers. Deloitte’s 2015 outlook reveals that life sciences companies are expected to continue expanding their presence in emerging markets through acquisitions and joint ventures. While the form, terms, and size of these deals—whether they are mergers, acquisitions, or joint ventures—vary widely, they share the overarching characteristic of changing the make-up of the entire industry. Research and development priorities and product ownership will inevitably shift as companies restructure, having an ultimate effect on consumers and on the delivery of health care.

* Professor of Law, Loyola University Chicago School of Law. Many thanks to Alexis Fede for research assistance on the information provided in Table 3. This article was developed for Loyola University Chicago School of Law, Beazley Institute for Health Law and Policy’s Ninth Annual Symposium on Access to Health Care, entitled Consolidation and its Impact on Quality, Accessibility, and Cost of Care.

1. The terms “bio-pharmaceutical” and “bio-pharma” used in this article refer to companies in the business of developing and/or marketing traditional chemical compounds regulated by the Food and Drug Administration (FDA) as human drugs, human biologics regulated by the FDA as biological products, or human drug-biologic combination products. This article will also use the general term “drug” to refer to both human drugs and human biologics approved by the FDA.


4. Id.

With increasing bio-pharmaceutical consolidation come questions about whether and why the business model has changed for bio-pharma, and how such a change impacts access, cost, quality, and innovation in the health and medical realm. Particularly timely is the question of whether bio-pharmaceutical consolidation is enabling massive hikes in cost of both prescription and generic drugs for health care consumers, health payors, and the federal and state governments alike. Since 2008, prices for brand drugs have increased a whopping 127 percent as compared to an 11 percent consumer price index increase.6 Rapidly escalating prices for prescription drugs such as Turing Pharmaceuticals’ toxoplasmosis drug Daraprim (pyrimethamine) and Valeant Pharmaceuticals’ heart drugs Isuprel (isoproterenol hydrochloride) and Nitropress (nitroprusside sodium) have prompted widespread concern that mergers and acquisitions are facilitating such rent-seeking behaviors in the marketplace.7 Congress is currently investigating these drug-pricing scenarios, and the industry players involved,8 as many policymakers and presidential candidates call for changes in the laws to address the problem.

Aside from the direct impact on medicine, health care, and drug costs specifically, there are also important related questions about oversight of this consolidation, and the level of control held by the federal government over the scope and terms of these business deals. In an effort to examine the role of the federal government, and specifically the Federal Trade Commission (FTC), in such oversight, this article will explore bio-pharmaceutical consolidation by reviewing select FTC actions and characterizing the features and outcomes of the resulting mergers and acquisitions. The article first briefly discusses several underlying drivers for bio-pharmaceutical consolidation identified in the literature, as well as the associated impacts. It

---


8. See Nathan Bomey, Martin Shkreli Pleads the Fifth, Then Tweets About ‘Imbeciles in Congress, USA TODAY (Feb. 4, 2016, 6:30 PM), http://www.usatoday.com/story/money/2016/02/04/martin-shkreli-congressional-testimony-turing-pharmaceuticals-valet-fda-drug-prices/79808004/ (noting the Congressional hearing regarding the price hike in Daraprim and the questions asked to Martin Shkreli, the CEO of Turing Pharmaceuticals).

utilizes the real-time drug pricing controversy involving Turing Pharmaceuticals and Valeant Pharmaceuticals as examples of the impact on cost associated with bio-pharma acquisitions. Next, the article explains the FTC’s role in pre-merger assessments and the basic requirements on industry imposed by federal legislation and FTC policy. The article then offers review and analysis of over fifty FTC actions involving mergers and acquisitions in the bio-pharmaceutical realm, drawing from three FTC publications. It characterizes core requirements and conditions set forth in the consent orders, and synthesizes the legal landscape gleaned from the FTC publications. The article then discusses implications for the future.

I. BIO-PHARMA CONSOLIDATION: CAUSE AND EFFECT

Several driving factors are cited for consolidation trends in bio-pharma. The first factor is healthcare reform, and specifically the evolving structure of the healthcare market.\(^\text{10}\) The impact of the Patient Protection and Affordable Care Act (ACA)\(^\text{11}\) can hardly be overstated. An emphasis on value-based health care and payment systems underlies the ACA, with the establishment of the Patient Centered Outcomes Research Institute (PCORI) leading the charge on comparative effectiveness research to inform evidence-based conversations about risks, benefits, and outcomes of different drug-based interventions.\(^\text{12}\) Although healthcare reform and implementation of the ACA are typically associated with trends in hospital and health insurance consolidation generally, many commentators also point to them as factors in bio-pharmaceutical consolidation given the focus on costs and pricing across the healthcare system, including drug pricing.\(^\text{13}\)

Second, commentators cite massive failures of previous business models as driving mergers and acquisitions in the bio-pharmaceutical sector.\(^\text{14}\) The strategy

---


\(^{12}\) The Patient Centered Outcomes Research Institute is an independent non-profit nongovernmental agency tasked with improving the quality and relevance of evidence available to help patients, caregivers, clinicians, employers, insurers, and policy makers make informed health decisions. Specifically, we fund comparative clinical effectiveness research, or CER, as well as support work that will improve the methods used to conduct such studies. About Us, PATIENT-CENTERED OUTCOMES RES. INST. (Oct. 6, 2014), http://www.pcori.org/about-us.

\(^{13}\) Numerof et al., supra note 10; Ian D. Spatz, Health Reform Accelerates Changes in the Pharmaceutical Industry, 29 HEALTH AFF. 1331, 1331 (2010), http://content.healthaffairs.org/content/29/7/1331.full.pdf+html.

of adjusting for these failures resembles a form of targeted risk aversion. Large pharmaceutical companies, particularly multi-national companies, have shifted focus to production and distribution, prioritizing mergers and acquisitions over initial stage research and development efforts. Many companies have made the decision to outsource research and development to smaller companies that they then acquire only after significant progress in product development. In drug research and development terms, this means shifting financial investments to phase II or III clinical investigations rather than early discovery and phase I clinical investigations. Phase I investigations involve the initial toxicity, pharmacodynamics and pharmacokinetics of a drug compound. These investigations are often unsuccessful, resulting in the abandonment of the drug for that specific indication. Nature reports that approximately 85 percent of drug therapies fail in the early clinical trial phases. Phase II and phase III investigations, while continuing these measures, are focused largely on long-term safety and efficacy, patient population, and adverse events. This shift may make business sense given the high cost of getting a drug to market, cited at an average of $1 billion and ten years of effort. However, it may also be slowing down innovation. Forbes notes that, “the major outcome for R&D in mergers is that there will ultimately be fewer scientists in R&D and fewer ideas being pursued.”

The third factor is the difficulty in identifying promising new drugs that have not already been developed, approved, and marketed. In other words, all of the low-hanging fruits have been picked. Companies are struggling to identify novel chemical, molecular, and biological entities with lucrative profit potential that have not been approved by the Food and Drug Administration (FDA) for one indication or another. Others counter that drug development has never been easy, that in fact there has never been any low-hanging fruit.

16. Id.
17. Id.
19. Id.
22. See, e.g., John LaMattina, There Has Never Really Been ‘Low Hanging Fruit’ in
The fourth factor is the expiration of patent protections for innovator drug compounds and processes. Widespread expiration of successful blockbuster drug patents, possibly the low-hanging fruit described above, can "decimate a company's revenues. Of course, patent expiration has different impacts on the innovator companies versus generic companies. On average, generic competition results in about 90 percent revenue loss within the first two years of patent expiration for the innovator product. Coupled with these patent expirations, the average development time from chemical identification to market approval has doubled to ten to fifteen years since the 1970s, causing a decrease in effective patent life. Relatedly, the fifth factor driving consolidation is a desire to strengthen, broaden, or expand existing product and patent portfolios in order to create new value for the company. If company patents are drying up, acquiring others' patents will generate new revenue.

The sixth factor for consolidation in bio-pharma is ample tax opportunities outside the United States for companies with a foreign address. One very recent, and highly controversial, example was Pfizer's proposed merger with Allergan, which houses its global headquarters in Dublin, Ireland. Characterized as a tax inversion deal, Pfizer announced its $160 billion merger with Allergan at the end of November 2015. The merger would have created the world's largest drug manufacturer and move the New York-based company's principle executive offices to Ireland where the tax rate is

27. KNOWLEDGE@WHARTON, supra note 14.
significantly reduced.\textsuperscript{30} The Pfizer-Allergan conglomerate would have boasted over 100 drugs in late- and mid-stage development and would save $2 billion by combining operations over the first three years.\textsuperscript{31} However, as a result of stricter government rules regarding corporate inversions announced in April 2016, the two companies abandoned the deal.\textsuperscript{32}

This is not an exhaustive list. The industry and academic literature reveals myriad driving factors for consolidation. The literature also identifies winners and losers, couched in terms of positive and negative impacts of these consolidations on a variety of actors. These actors include the U.S. market, competitors, consumers and patients, federal and state insurance programs, researchers and scientists, and company employees. Regularly cited as tangible negative impacts are large-scale job losses,\textsuperscript{33} outsourcing of manufacturing to other countries,\textsuperscript{34} decline in research and development,\textsuperscript{35} shifts in resource allocation away from early-stage investigations,\textsuperscript{36} elimination of certain types of product development, general stalling of innovation,\textsuperscript{37} drug shortages resulting from removal of products from the

\textsuperscript{30} Puzzanghera & Masunaga, supra note 29.
\textsuperscript{31} Melissa Lipman, Antitrust Concerns Won't Derail $160B Pfizer-Allergan Deal, LAW360 (Nov. 23, 2015, 8:43 PM), http://www.law360.com/articles/730724/antitrust-concerns-won-t-derail-160b-pfizer-allergan-deal.
\textsuperscript{34} Global Contract Manufacturing Companies: Pharmaceutical and Biotechnology, PHARMALIVE (Nov. 11, 2011), http://www.pharmalive.com/global-contract-manufacturing-companies-pharmaceutical-and-biotechnology/ (Moving forward, pharma companies are expected to outsource growing amounts of manufacturing as companies concentrate on R&D and marketing activities.).
\textsuperscript{35} Robert Thong, Root Causes of the Pharmaceutical R&D Productivity Crisis, SCITECHSTRATEGY (Mar. 31, 2015), http://scitechstrategy.com/2015/03/root-causes-of-the-pharmaceutical-rd-productivity-crisis/ (noting that "consolidation in the pharmaceutical industry and the concomitant scaling up and industrialization of its R&D infrastructure had created diseconomies of scale, severely reducing the innovative culture of the R&D organizations and the creative risk-taking of their scientists.").
\textsuperscript{36} Chris Lo, Pharma Mergers: Big Business, Bad Science?, PHARMACEUTICAL TECH. (Jan. 7, 2015), http://www.pharmaceutical-technology.com/features/featurepharma-mergers-big-business-bad-science-4467897/ (explaining that consolidation among pharmaceutical companies can lead to the termination of research and development activity that doesn't fit with the larger company's broader goals or early-stage research that is deemed too risky to continue).
\textsuperscript{37} Id. (arguing that consolidation hinders innovation because it has led to a cost-saving, research-cutting pattern resulting in the elimination of research sites, programs, and scientists. Also, the article argues that consolidation decreases healthy competition, which fuels innovation).
market, and higher prices for consumers through price increases.

Perhaps the timeliest of these cited negative impacts is that of inflated drug pricing. Media outlets such as the New York Times, the Wall Street Journal, and the Huffington Post have relentlessly targeted a number of bio-pharma companies for pricing activity in late 2015. While the FDA is responsible for review and approval of new drugs and biologics, the agency does not have a role in the eventual price of the commercial products once on the market. Likewise, the Department of Health and Human Services assesses coverage for federal reimbursement purposes, though the agency has no control over the prices themselves. And the FTC and the Department of Justice (DOJ) are tasked with policing anticompetitive behavior through review of mergers and acquisitions, yet neither agency specifically examines current pricing regimes as part of the legal analysis of pending consolidations. The next section examines the FTC’s role in consolidation assessments.

The contemporary touchstone of bad industry behavior in this realm is uncontroversially Turing Pharmaceuticals’s (now former) CEO, Martin Shkreli. Following the August 2015 acquisition of the five decades-old

38. Rob Stein, Shortages of Key Drugs Endanger Patients, WASH. POST (May 1, 2011), https://www.washingtonpost.com/national/shortages-of-key-drugs-endanger-patients/2011/04/26/AF1ajXF_story.html?hpid=r5 ("Consolidation in the pharmaceutical industry has left only a few manufacturers for many older, less profitable products, meaning that when raw material runs short, equipment breaks down or government regulators crack down, the snags can quickly spiral into shortages.").


42. Amy Goldstein, Sharp Increases in Drug Costs Draw Hundreds to Government Forum, WASH. POST (Nov. 20, 2015), https://www.washingtonpost.com/news/to-your-health/wp/2015/11/20/sharp-increases-in-drug-costs-draw-hundreds-to-government-forum/ ("HHS has written to pharmaceutical companies, asking them to provide more information about their pricing and ideas on how to encourage prices that promote access.").

prescription drug Daraprim from Impax Laboratories, Shkreli ratcheted up the price of Daraprim from $13.50 to $750.00 per pill. The media coverage, public backlash, and state legal actions were swift. The New York Attorney General’s Office began an investigation under state antitrust laws in October. On December 17, 2015, Shkreli and his corporate attorney were both arrested in Manhattan on charges of securities fraud and conspiracy perpetrated during Shkreli’s tenure at Retrophin. Shkreli resigned from Turing the following day and was fired as CEO of another company, KaloBios Pharmaceuticals, a few days later.

Similarly, Valeant Pharmaceuticals has been subject to intense scrutiny for its hefty price increase for the two heart drugs Isuprel (isoproterenol hydrochloride) and Nitropress (nitroprusside sodium), acquired mid-2015 from Salix Pharmaceuticals. List prices for the drugs rose steeply 212 percent and 525 percent. The price for a third drug acquired from Salix, the type 2 diabetes drug Glumetza (metformin hydrochloride), rose 800 percent. In October, the U.S. Attorneys’ Offices subpoenaed the company for the District of Massachusetts and the Southern District of New York.

45. Pollack, supra note 40.
52. Pollack & Tavernise, supra note 50.
53. Ransdell Pierson & Bill Berkrot, Valeant Subpoenaed by U.S. Prosecutors; Shares
Congress and politicians have also responded to the pricing controversy inspired by Valeant, Turing, and others. The Senate Special Committee on Aging initiated an investigation of four companies: Retrophin, Rodelis Therapeutics, Turing Pharmaceuticals, and Valeant Pharmaceuticals.\(^5\)
Likewise, the House Oversight and Government Reform Committee is investigating several companies\(^6\) and House Democrats have created a new investigative task force and plan on summoning executives at Turing and Valeant for a Congressional hearing.\(^5\) On December 16, 2015, Delaware Representative Elijah Cummings sent a letter to the CEO of Valeant Pharmaceuticals threatening a subpoena if he failed to provide the House Committee with requested documents and interviews from witnesses prior to January 8th in preparation for a committee meeting on drug pricing.\(^5\)
Presidential candidates Hillary Clinton and Bernie Sanders have made drug pricing and "pharma profiteers" a campaign issue.\(^5\)

II. MERGERS, ACQUISITIONS, AND THE FEDERAL TRADE COMMISSION

The FTC is responsible for protecting the public from anticompetitive behavior and deceptive and unfair trade practices.\(^6\) Along with the DOJ, the FTC prosecutes violations of the Clayton Act.\(^6\) The Health Care Division within the FTC’s Bureau of Competition investigates alleged antitrust

---

56. Edney & Mittelman, supra note 54.
57. McIntire, supra note 55.
violations in the health care realm, including pharmaceutical matters.\textsuperscript{62} An important aspect of the work of the Health Care Division is overseeing mergers and acquisitions.\textsuperscript{63}

The Hart-Scott-Rodino Antitrust Improvements Act of 1976\textsuperscript{64} establishes a federal system of premerger notification in order to prevent anticompetitive mergers and acquisitions.\textsuperscript{65} Any deal valued at $76.3 million\textsuperscript{66} or more must be reported for review both to the FTC and the DOJ.\textsuperscript{67} Parties must complete a "Notification and Report Form for Certain Mergers and Acquisitions" detailing information about each business involved in the transaction.\textsuperscript{68} There is then a waiting period, typically thirty days, during which the parties may not move on the deal unless the government grants an early termination of the waiting period.\textsuperscript{69}

Upon review, the FTC may challenge any merger that in its view will result in a substantial lessening of competition.\textsuperscript{70} An FTC challenge to a particular transaction is conducted in an administrative adjudication before an administrative law judge (ALJ).\textsuperscript{71} Appeals from the initial ALJ decision may be brought to the full Commission; appeals from the full Commission decision may be brought in federal courts of appeal.\textsuperscript{72} The FTC may also seek a preliminary or permanent injunction in federal district court.\textsuperscript{73}

The FTC has targeted some hospital and healthcare mergers and


\textsuperscript{63} Id. at 26.


\textsuperscript{67} Id.


\textsuperscript{69} See id. at 9.


\textsuperscript{73} Id.
acquisitions citing the need for healthy competition in those industries.\footnote{74} Despite pleas from some outlets that healthcare markets are different and that strategically unified health and medical services are optimal, the FTC maintains that the antitrust laws nonetheless apply with equal force.\footnote{75} The FTC highlights:

[W]hen a merger or other form of collaboration may allow providers to demand higher fees through increased bargaining leverage, the antitrust laws are the appropriate mechanism for determining whether consolidation or collaboration, on balance, is more likely to result in higher costs without corresponding improvements in quality of care. And the risk of harm increases when integration or coordination involves a substantial portion of the competing providers in any particular service or specialty.\footnote{76}

The FTC has specifically challenged a number of bio-pharma mergers and acquisitions identified in pre-merger notifications submitted to the agency.\footnote{77} In a recent annual report, the FTC notes that 6.1 percent of the transactions set forth in pre-merger filings are in the chemical and pharmaceutical realm.\footnote{78} For example, the FTC position regarding the proposed 2008 acquisition of Taro Pharmaceutical Industries by Sun Pharmaceutical Industries was that the transaction `would be anticompetitive and would cause U.S. consumers to pay higher prices for three distinct generic formulations of the anticonvulsant drug carbamazepine, because `[b]oth companies either manufacture the relevant generic drug products and sell them in the United States, or are set to enter the U.S. market with competing products in the near future, pending regulatory approval.`\footnote{79} In order to proceed with the acquisition, the FTC required Sun to enter into a consent order to sell all rights and assets to the three anticonvulsant drugs to an India-based generic drug manufacturer.\footnote{80}

\footnote{74} See, e.g., Marina Lao et al., Not Just an Opinion: Competition Really is Key to Healthy Health Care Markets, FED. TRADE COMM’N (July 8, 2015, 9:54 AM), https://www.ftc.gov/news-events/blogs/competition-matters/2015/07/not-just-opinion-competition-really-key-healthy-health.


\footnote{76} Lao et al., supra note 74.


\footnote{78} Id. at 7.


\footnote{80} Id.
The following section analyzes FTC assessments and consent orders resulting from premerger notification review in order to further characterize their substance and scope.

III. FTC ENFORCEMENTS ACTIVITY: A MODEST SAMPLE

This section draws from three reports published by the FTC. The first is a March 2013 report by the FTC Health Care Division that provides an overview of select antitrust actions in pharmaceutical services and products spanning 1989 through early 2013. The second and third are joint FTC Bureau of Competition and DOJ Antitrust Division Hart-Scott-Rodino annual reports for fiscal year 2013 and 2014 that identify merger enforcement activity resulting from premerger notifications. In total, these three reports detail fifty-four relevant bio-pharma mergers and acquisitions scrutinized by the FTC from FY 1989-2014. Table 1 provides a listing of these fifty-four enforcement actions initiated by the FTC as described in these three reports. The format of the references correspond directly to the reference provided in each report.

<table>
<thead>
<tr>
<th>Table 1: FTC Reports Enforcement Action Tallies (Alphabetical Order)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTC Bureau of Competition, Health Care Division, Overview of FTC Antitrust Actions in Pharmaceutical Services and Products, March 2013 (45 Total)</td>
</tr>
<tr>
<td>Actavis/Abriva</td>
</tr>
<tr>
<td>Allergan/Inamed</td>
</tr>
<tr>
<td>American Home Products/American Cyanamid</td>
</tr>
<tr>
<td>Amgen/Immunex</td>
</tr>
</tbody>
</table>

81. FTC ANTITRUST ACTIONS, supra note 62.
Barr/Pliva
Baxter-Immuno International
Baxter/Wyeth
Cephalon/Cima Labs
Ciba-Geigy/Sandoz
Dow Chemical/Rugby Darby Group
Fresenius Medical Care/Daiichi Sankyo
Genzyme/Ilex Oncology
Glaxo/Burroughs Wellcome
Glaxo Wellcome/SmithKline Beecham
Grifols/Talecris
Hikma/Baxter
Hoechst/Dow
Hoechst/Rhone-Poulenc
Hospira/Mayne
IVAX/Zenith
Johnson & Johnson/Pfizer
King/Alpharma

A Profile of Bio-pharma Consolidation Activity

1. Mylan/Merck
2. Novartis/Alcon
3. Novartis/ON
4. Novartis/EON
5. Perrigo/Paddock
6. Pfizer/Pharmacia
7. Pfizer/Warner-Lambert
8. Pfizer/Wyeth
9. Roche Holding AG/Corange Limited
10. Sanofi-Synthelabo/Aventis Pharma
11. Schering-Plough/Merck & Co.
12. Schering-Plough/Organon International
13. Sun Pharmaceutical Industries Ltd./Taro Pharmaceutical Industries Ltd.
14. Teva Pharmaceutical Industries/Barr Pharmaceuticals
15. Teva Pharmaceutical Industries/Cephalon, Inc.
16. Teva Pharmaceutical Industries/IVAX Pharmaceuticals, Inc.
17. The Upjohn Company/Pharmacia

Valeant Pharmaceuticals/Dermik
Valeant Pharmaceuticals/Ortho Dermatologics, Inc.
Watson Pharmaceuticals, Inc./Actavis
Watson Pharmaceuticals, Inc./Andrx Corporation
Watson Pharmaceuticals, Inc./Arrow Pharmaceuticals
Zeneca Group PLC/Astra

FTC Bureau of Competition and DOJ Antitrust Division, Hart-Scott-Rodino Annual Report Fiscal Year 2013 (2 Total)

Actavis/Warner Chilcott
Mylan/Agila Specialties

FTC Bureau of Competition and DOJ Antitrust Division, Hart-Scott-Rodino Annual Report Fiscal Year 2014 (6 Total)

Akorn, Inc./Hi-Tech Pharmaceuticals
Akorn, Inc./VersaPharm Inc.
Endo International, PLC/Boca Life Science Holdings, LLC

124. Watson Pharm. Inc. et al., F.T.C. No. 1210132, at 2-52 (Dec. 13, 2012) https://www.ftc.gov/sites/default/files/documents/cases/2012/12/121214watsonactavisdo.pdf (since this was also contained in one of the other reports, it is not listed in the Table 1 tallies.).
These three reports were consulted and analyzed in order to address the following general inquiry: what limitations has the FTC imposed on mergers and acquisitions in the bio-pharma realm through pre-merger enforcement actions? The methodology entailed identification of bio-pharma companies in each of the three reports for inclusion in the assessment. Medical device companies, health insurance companies, and hospitals were excluded from assessments as outside the realm of the bio-pharma sector. Also excluded were enforcement actions that were ultimately dismissed or enforcement actions where the parties cancelled the planned transaction. Each relevant description involving a bio-pharma company was then reviewed and characterized in terms of consent order requirements, as set forth by the FTC report. Report descriptions included both FTC adjudications resulting in consent order and litigation resulting in consent order. The end of each description within the reports identified the core consent order requirements.

There are several limitations to this methodological approach. The first is reliance on the FTC report summations of the consent order rather than on analysis of the consent orders themselves. The second is incomplete information on a number of fronts, including a lack of: detailed characteristics of each transaction, the number and extent of drug products involved, concessions made by the company during the course of adjudication, and follow-up information on how the companies fulfilled the consent order requirements. The third is that the reports provide no indication of why the FTC flagged these particular transactions as problematic, and relatedly, why other transactions were not flagged for enforcement action. General features mentioned within the report descriptions do provide some guidance on why the deals were flagged by the FTC. These noted features included the monetary size of the deal, the relationship between the companies and their competitive positions, the markets involved (e.g., generic, brand, or specialty drug markets), and the potential impact on the availability of particular drug products resulting from the transaction. Despite these limitations, the methodology does provide a useful glimpse at the defining characteristics of FTC requirements for bio-pharma mergers and

acquisitions, as set forth in the consent orders.

The findings are discussed below, divided into eleven categories of requirements and conditions: divestiture; trustee/monitor appointment; prior approval of certain activity; relinquishment/termination; return; transfer; supply arrangements; intellectual property; confidentiality; competition restrictions; and miscellaneous. Table 2 lists these categorizations. Each is expanded on below. Truncated references identify the parties to the transaction and correspond to Table 1 full references.

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divestiture</td>
</tr>
<tr>
<td>Trustee/Monitor Appointment</td>
</tr>
<tr>
<td>Prior Approval of Certain Activity</td>
</tr>
<tr>
<td>Relinquishment/Termination</td>
</tr>
<tr>
<td>Return</td>
</tr>
<tr>
<td>Transfer</td>
</tr>
<tr>
<td>Supply Arrangements</td>
</tr>
<tr>
<td>Intellectual Property</td>
</tr>
<tr>
<td>Confidentiality</td>
</tr>
<tr>
<td>Competition Restrictions</td>
</tr>
<tr>
<td>Miscellaneous</td>
</tr>
</tbody>
</table>

A. Divestiture

One resounding finding is that in most of the fifty-four consent orders, the FTC required divestiture of some measure, subject to much variation. The consent orders uniformly required divestiture of certain rights and assets, typically identifying particular products to be divested. The consent orders often specified to whom the divestiture was to be made, by what deadline, and conditioned the final deal on the approval of the FTC. Many contained a provision specifying that if the FTC determined that the named companies for divestiture purchase were not acceptable buyers, the company must abandon the deals and find FTC-approved buyers within a set time frame. See, e.g., Watson Pharm., supra note 125, at 27 (specifying the time frame at six months). 

order that 'would have required a larger asset divestiture had the more narrowly tailored divestiture not occurred.'\textsuperscript{138}

The consent orders included requirements for the divestiture of specific product business;\textsuperscript{139} divestiture of worldwide rights to a specific product;\textsuperscript{140} divestiture of trademark rights to specific products;\textsuperscript{141} divestiture of contractual rights to a drug, either to the named divestiture buyer or a third party approved by FTC;\textsuperscript{142} and divestiture of a brand.\textsuperscript{143} One case expressly identified the scope of the assets in that case as including 'patents, ... technology, ... manufacturing information, testing and quality control data, research materials, ... customer lists... [and] inventory sufficient ... to complete all clinical trials or ... studies necessary to obtain FDA approval.'\textsuperscript{144} Another required the divestiture of development and distribution rights, including ongoing clinical trials for a particular product.\textsuperscript{145} Several required divestiture of certain U.S. patents and other assets in areas where the divestiture buyer markets the drug.\textsuperscript{146} Others required the divestiture of assets and termination of interests.\textsuperscript{147} Many consent orders required that the divesting party maintain the drug's viability, marketability, and competitiveness pending divestiture.\textsuperscript{148}

B. Trustee/Monitor Appointment

A number of consent orders required the appointment of a third party to assess and assure compliance with the terms of the order. The provisions ranged from a general right of the FTC to appoint an interim monitor to ensure parties fulfill their obligations at any time\textsuperscript{149} to in-depth specifications on what that monitor is to accomplish. One consent order set forth the right

\textsuperscript{138} FTC ANTITRUST ACTIONS, supra note 62, at 52 (referring to this as the 'crown jewel').
\textsuperscript{140} See Glaxo Wellcome PLC, et al., supra note 96, at 56.
\textsuperscript{141} Id.
\textsuperscript{142} See Sanofi-Synthelabo, et al., supra note 114, at 478.
\textsuperscript{143} See generally Pfizer Inc., et al., supra note 110, at 608.
\textsuperscript{144} See Glaxo PLC, supra note 95, at 819.
\textsuperscript{145} See Allergan, Inc., supra note 84, at 5, 12.
\textsuperscript{146} See, e.g., Sanofi-Synthelabo, et al., supra note 114, at 487.
\textsuperscript{147} See, e.g., Baxter Intl Inc., et al., supra note 8889, at 49; see also, Zeneca Grp. PLC, supra note 127, at 874 (requiring the 'transfer and surrender of rights and assets).
\textsuperscript{148} See Akorn Inc., supra note 130, at 27; see also, Actavis, Inc., supra note 128, at 31.
\textsuperscript{149} See Schering-Plough Corp., supra note 115, at 33; see also Akorn Inc., supra note 130, at 29.
of the FTC to appoint a trustee after a failure to comply as a means to assure that assets are returned as required. Another included an express provision for the appointment of an interim trustee to ensure that the development of a particular product is maintained in the future. Perhaps most detailed, one consent order provided for the appointment of an interim monitor to ensure that information is adequately communicated to the FDA, that the company acquiring the divested product line gets assistance with a pending abbreviated new drug application ("ANDA"), and that transitional services are provided so the third party can eventually manufacture the product independently. These last two monitor duties relate to supply arrangements, which are further discussed below.

C. Prior Approval of Certain Activity

The prior approval provisions were tied to the acquisition of property or assets in the future. One iteration required the prior approval of the FTC before the acquisition of any stock in a company that manufactures or is an exclusive distributor for another manufacturer of a specific product. A second required prior approval from the FTC before acquisition of any manufacturing, production, or distribution capabilities for a specific product. A third prohibited the acquisition of certain listed assets without the prior approval of the FTC

D. Relinquishment/Termination

There were several consent orders requiring the relinquishment of assets, including provisions requiring the relinquishment of marketing rights to another firm and the relinquishment of "all options to regain control over a certain product." Termination requirements took many forms, such as the termination of an existing development and manufacturing agreement with a third party and transfer of manufacturing rights back to a third party, termination of a co-marketing agreement with a third party, termination of

150. See generally, Novartis AG, supra note 106, at 29-32.
151. See Pfizer Inc., supra note 143112, at 55.
152. See Akom Inc., supra note 130, at 2-37.
153. See IVAX Corp., supra note 102, at 362 (specifying that prior approval is needed for ten years following the date the order becomes final).
154. See Dow Chemical Co., et al., supra note 92, at 742 (specifying that prior approval is needed for ten years following the date the order becomes final).
155. See Schering-Plough Co., supra note 116,115 at 23-24 (specifying that prior approval is needed for ten years following the date the order becomes final).
156. See generally Watson Pharm., supra note 125, at 2-44.
157. See Glaxo Wellcome PLC, et al., supra note 96, at 56.
158. See generally Watson Pharm. Inc., et al. supra note 125.
159. See Baxter Int'l Inc., et al., supra note 88, at 49.
all confidential information regarding a certain product,\textsuperscript{160} and full\textsuperscript{161} or partial assignment of manufacturing contracts.\textsuperscript{162}

E. Return

There were also several forms of requirement to return assets or property. These included the requirement of the return of exclusive distribution rights;\textsuperscript{163} the requirement to end a marketing agreement with a third party and return all rights to distribute, market, and sell certain products;\textsuperscript{164} and the return of all rights to a specific drug in clinical development to a third party.\textsuperscript{165}

F. Transfer

Transfer requirements dealt with conditions such as the transfer of supply agreement to the divestiture buyer,\textsuperscript{166} the transfer of manufacturing facilities to the divestiture buyer,\textsuperscript{167} and the transfer of all technical knowledge for certain product to the divestiture buyer.\textsuperscript{168}

G. Supply Arrangements

Provisions for supply arrangement were perhaps the most far-ranging and specific to drug products and development status. This makes sense, as the FTC focus on the impact on drug markets relates to supply and demand of these products in the marketplace. One consent decree required the entry into a supply agreement to provide the third party with generic tablets, allowing the third party to compete with the generic product during the 180-day exclusivity; the supply agreement could be extended one additional year by the third party.\textsuperscript{169} Another required the party divesting to provide transitional

\textsuperscript{160} See Pfizer Inc., supra note 165, at 8-9.
\textsuperscript{165} See Pfizer Inc., et al., 135 F.T.C. 608 (2003).
\textsuperscript{166} See Actavis Grp. hf, supra note 83 (giving Respondents thirty days to assign the Supply Agreement to the Acquirer of Isradipine Assets).
\textsuperscript{167} See Sanofi-Synthelabo, et al., supra note 114 (requires Respondents Sanofi-Synthelabo and Aventis to divest all manufacturing facilities and other assets used to produce Arixtra to GlaxoSmithKline).
\textsuperscript{168} See Cephalon, Inc., 138 F.T.C. 583 (2004) (requiring Cephalon to effect transfers of licenses and technology to enable Barr Laboratories to be able to compete more aggressively in the market for breakthrough cancer pain drugs).
services to the buyer in order to assist the buyer manufacture and sell products successfully.\textsuperscript{170} Another required the manufacture of a specific product for a set number of years for the third party to sell in the U.S., a provision designed to expedite drug entry as an additional competitor.\textsuperscript{171} One required a supply and transition services agreement for the supply of the product for a set number of years while the divestiture buyer obtained the necessary approvals from the FDA.\textsuperscript{172} Another required a contract for the manufacture of certain ingredients until the divestiture buyer obtained the necessary approvals and supply sources to make the ingredients.\textsuperscript{173} One order required the company to provide necessary assistance to the divestiture buyer to complete clinical trials.\textsuperscript{174} Others required the provision of the finished product for sale to the divestiture buyer;\textsuperscript{175} payments of costs for the completion of clinical trials;\textsuperscript{176} a short term service agreement with the divestiture buyer in order to `ensure the continued performance of development work';\textsuperscript{177} the acquirer to `continue carrying our certain ongoing activities relating to the commercialization of a certain product, including manufacturing, regulatory, clinical, development and marketing activities';\textsuperscript{178} the maintenance of the viability of drugs until the transfer to an FTC-approved buyer;\textsuperscript{179} the provision of transitional services to enable parties to complete

clinical testing and obtain regulatory approval;\textsuperscript{180} and technical transfer assistance.\textsuperscript{181}

H. Intellectual Property

Intellectual property ("IP") provisions took many forms, likely associated with the FTC's concern over pay-for-delay settlement agreements and other tactics viewed as anticompetitive. Those framed as prohibitions included prohibiting a party from accepting payments or entering into pay-for-delay agreements\textsuperscript{182} and prohibiting the merged company from acquiring exclusive rights in certain IP and technology related to certain product areas and technology.\textsuperscript{183}

Beyond prohibitions, many of the consent orders required the relinquishment, assignment, licensing, grant, and renegotiations of IP.\textsuperscript{184} One required the licensing of rights to manufacture and market the authorized generic version of the drug divested to a third party.\textsuperscript{185} Another required the license of certain patents to a third party that block the ability to market in U.S.\textsuperscript{186} Others required the assignment of all relevant intellectual property rights;\textsuperscript{187} the relinquishment of reversionary rights;\textsuperscript{188} the grant of an irrevocable worldwide license to rights and patents jointly owned;\textsuperscript{189} the grant

---

\textsuperscript{180} See FTC Antitrust Actions, supra note 62, at 8 ("The order requires Schering and Merck to provide transitional services to enable Opko to complete clinical testing and obtain regulatory approval to market Rolapitant in the U.S.").

\textsuperscript{181} See id. at 38 ("The order also requires that Sun provide transitional services including help obtaining necessary FDA approvals and technical transfer assistance.").

\textsuperscript{182} See id. at 32 ("To preserve competition in the testosterone gel market, the order prohibits Perrigo ... from entering into any pay-for-delay arrangements with Abbott.").

\textsuperscript{183} See id. at 62 ("The merged company could not acquire exclusive rights in certain intellectual property and technology related to chemoresistance gene therapy.").

\textsuperscript{184} See generally FTC Antitrust Actions, supra note 62.

\textsuperscript{185} See id. at 29 ("The order required Valeant ... to license to Mylan the rights to manufacture and market the authorized general version of Efudex.").

\textsuperscript{186} See id. at 48 ("The order requires that A|men license certain patents to Sereno, a Swiss company developing a TNF inhibitor for use in Europe, that block Sereno's ability to market in the U.S.").

\textsuperscript{187} See id. at 50 ("The order required Glaxo to assign all of its relevant intellectual property rights and relinquish all of Glaxo's reversionary rights to G147211C to Gilead Sciences.").

\textsuperscript{188} See id. ("The order required Glaxo to ... relinquish all of Glaxo's reversionary rights to G147211C to Gilead Sciences.").

\textsuperscript{189} See id. at 51 ("The order required Pfizer to return its EGFr-tk inhibitor, CP-358,774, along with its technology and knowhow assets to its development partner OSI, to grant OSI an irrevocable worldwide license to its rights and patents jointly owned with Pfizer.").
of a non-exclusive license to certain patented technologies essential for development and commercialization of certain products to all requesters;\textsuperscript{190} and the grant of non-exclusive license of certain technology and patent rights related to specific therapies.\textsuperscript{191}

One detailed consent order required the renegotiation of license and supply agreements with a third party to allow that third party to operate as an independent competitor by eliminating control over the product, restricting the type of information obtainable about the drug, and allowing the third party to compete in the development of another product.\textsuperscript{192} Another required changing the licensing agreement for specific products and eliminating reporting arrangements to assure that the acquirer does not obtain competitively-sensitive information.\textsuperscript{193} Yet another required the acquirer to license product formulations and production technology to a third party within a specific timeframe.\textsuperscript{194} Finally, one required the relinquishment of any claim to first-filer marketing exclusivity.\textsuperscript{195}

I. Confidentiality

One consent order required the maintenance of confidentiality of all marketing information for a specific product.\textsuperscript{196}

\textsuperscript{190}. See id. at 61 (noting that Novartis 'was required to grant to all requesters a non-exclusive license to certain patented technologies essential for development and commercialization of gene therapy products.).

\textsuperscript{191}. See id. ('Novartis also was required to grant a non-exclusive license of certain technology and patent rights related to specific therapies for cancer, GV HD, and hemophilia to a Commission-approved licensee.).

\textsuperscript{192}. See id. at 46 ('The order requires Pharmacia to renegotiate its license and supply agreement with Novartis to allow Novartis to operate as an independent competitor by eliminating the control Pfizer would have over Novartis-s product, restricting the type of information Pfizer would be able to obtain about Deramaxx, and allowing Novartis to compete with Pfizer in the development of a second generation canine arthritis product.).

\textsuperscript{193}. See id. at 55 ('The order required changing the licensing agreement for cytokines and eliminating reporting arrangements to assure that American Home Products does not obtain competitively-sensitive information.).

\textsuperscript{194}. See id. at 56 ('The order required [Marion Merrell Dow, Inc.] to license dicyclomine formulations and production technology to a third party within 12 months . . . .).

\textsuperscript{195}. FTC Settles Charges That Actavis's Proposed $8.5 Billion Acquisition of Warner Chilcott Would be Anticompetitive, \textsc{Fed. Trade Comm'n} (Sept. 27, 2013), https://www.ftc.gov/news-events/press-releases/2013/09/ftc-settles-charges-actavis%E2%80%99s-proposed-85-billion-acquisition ("[T]he proposed order requires Actavis to relinquish its claim to first filer marketing exclusivity for generic Lo Loestrin FE and Atelvia products to preserve the incentives of the companies currently leading the patent litigations against Warner Chilcott related to those products."). This exclusivity is technically rewarded by the FDA rather than the U.S. Patent & Trademark Office, but the exclusivity similarly acts as a means to exclude others from the market space for the statutorily-provided 180 days.

\textsuperscript{196}. FTC Antitrust Actions, supra note 62, at 50-51 ('The order required Warner to end its co-promotion agreement with Forest, return all confidential information regarding Celexa to Forest, maintain the confidentiality of all Celexa marketing information . . . .).
J. Competition Restrictions

One consent order prohibited former sales employees involved in marketing one product from selling another until a certain date. \(197\)

K. Miscellaneous

For lack of a unifying theme, the remainder of the consent order requirements fell into the category of miscellaneous. One provided incentives for one party (the acquirer) to proceed with the development of the other party’s specific product. \(198\) Another allowed acquisition except for rights to market or sell a specific product under an existing exclusive distribution agreement with a third party. \(199\) There was also a restriction “from reporting an intra-company transfer price higher than the level set in the order . . . . . . \(200\)

Subject to product approval, there was a further requirement in this consent order to “report its intra-company transfer price at the lowest of either the level set forth in the order or the lowest price sold to any customer until the set date. \(201\) Lastly, one required that the divestiture buyer “will be able to enter into employment contracts with key individuals who have experience relating to” the product. \(202\)

IV. Implications Going Forward

This article has attempted to examine some of the drivers and impacts of bio-pharma consolidation, and identify and characterize requirements on the industry set forth by the FTC in select consent orders. Recognizing the inherent limitations of the methodology, the three FTC reports consulted for this task nonetheless shed some light on the legal assessments conducted on pre-merger notification submissions to the agency in the bio-pharma realm. Aside from divestiture, the FTC imposes a number of other detailed limitations and conditions on mergers and acquisitions tailored to each individual scenario.

\(197\). See id. ("The order required Warner to end its co-promotion agreement with Forest . . . and prohibited former Warner sales employees involved in marketing Celexa from selling Zoloft until March 2001.").

\(198\). See id. at 47 ("The order requires Baxter to terminate its co-marketing agreement with Watson and provides incentives for Baxter to proceed with development of Wyeth’s iron gluconate product.").

\(199\). See id. at 54 ("The consent order permitted IVAX to acquire Zenith except for Zenith’s rights to market or sell verapamil under Zenith’s exclusive distribution agreement with Searle.").

\(200\). Id. at 63.

\(201\). Id.

\(202\). Id. at 58 (It was required of Allergan to divest the development and distribution rights, ensure confidential business information would not be obtained by Allergan, and that Ipsen would be able to enter into employment contracts with key individuals).
It is difficult, if not impossible, to discern whether and how FTC scrutiny of these consolidations has shifted over the decades since enactment of the Hart-Scott-Rodino Act, or how scrutiny will play out in the future. However, one thing is certain: bio-pharma consolidation continues at a rapid pace. Post-2014, there have been many high-profile mergers and acquisitions in the bio-pharma space. For example, on March 2, 2015, Novartis and GlaxoSmithKline ("GSK") struck a $28.5 billion deal in which Novartis acquired GSK’s oncology business and became GSK’s preferred partner for the commercialisation of its oncology pipeline. Novartis transferred its vaccines division (excluding flu) to GSK. The two companies also entered into a joint venture for over-the-counter ("OTC") consumer products. In two additional deals, Actavis acquired Allergan for $70.5 billion, on March 17, 2015, and Bayer purchased Merck’s OTC business for $14.2 billion on October 1, 2014. The Valeant and Salix transaction in April 2015 led to the controversial drug price increase for Isuprel (isoproterenol hydrochloride) and Nitropress (nitroprusside sodium).

The beauty of a symposium article is that it can raise more questions than it answers. This article is no exception, and hopefully it fuels more targeted research into this realm. As an initial matter relating to the current connection being drawn between bio-pharma consolidation and drug price increases, it


204. See infra Table 3 for a non-exhaustive list of ten of the top reported mergers and acquisitions occurring after the time periods covered in the three FTC reports. Note that the FTC 2014 fiscal year captured October 1, 2013 to September 30, 2014. Table 3 begins with October 2014.

205. Miglierini, supra note 15.

206. Id.

207. Id.


211. Rockoff & Silverman, supra note 6 (stating that the list price of Isuprel had increased from $215.46 to $1,346.62 and the list price of Nitropress had increased from $257.80 to $805.61).
remains to be seen whether and how Congress, and the states, will implement legislation regarding drug-pricing practices and transparency. Also ripe for further consideration is how the FTC might more rigorously incorporate concerns about future drug pricing into their consolidation assessments and consent orders. Finally, it is worth delving into much more analysis of the available adjudication and consent orders in the bio-pharma sector to inform discussions about rectifying perceived shortcomings in the current system set forth by law and FTC policy.

**Table 3: Recent Mergers & Acquisitions – A Humble Sample (October 2014 - July 2015)**

<table>
<thead>
<tr>
<th>Companies</th>
<th>Brief Description</th>
<th>Date</th>
<th>Value</th>
<th>Product Division(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hikma Pharmaceuticals Plc (Germany) &amp; Boehringer Ingelheim (Germany)³</td>
<td>Hikma acquired B-I's U.S. specialty generic drugs business</td>
<td>July 28, 2015</td>
<td>$2.65 B</td>
<td>Generic drugs</td>
</tr>
<tr>
<td>Teva Pharmaceutical Industries (Israel) &amp; Allergan (Ireland)³</td>
<td>Teva acquired Allergan's generic business</td>
<td>July 27, 2015</td>
<td>$40.5 B</td>
<td>Generic drugs</td>
</tr>
<tr>
<td>Celgene Corp. (NJ) &amp; Receptos, Inc. (CA)⁴</td>
<td>Celgene acquired Receptos</td>
<td>July 14, 2015</td>
<td>$7.2 B</td>
<td>Autoimmune drugs</td>
</tr>
<tr>
<td>AstraZeneca (Sweden) &amp; Tillotts Pharma AG (UK)⁵</td>
<td>AstraZeneca divested global rights, outside the US, of Entocort to Tillotts</td>
<td>July 9, 2015</td>
<td>$215 M</td>
<td>Entocort (gastroenterology treatment)</td>
</tr>
<tr>
<td>Valeant (Canada) &amp; Salix Pharmaceuticals (NC)⁶</td>
<td>Valeant acquired Salix</td>
<td>Apr. 1, 2015</td>
<td>$11 B</td>
<td>Gastroenterology treatments</td>
</tr>
<tr>
<td>Actavis (Ireland) &amp; Allergan (Ireland)⁷</td>
<td>Actavis acquired Allergan</td>
<td>Mar. 17, 2015</td>
<td>$66-$70.5 B</td>
<td>Generic, OTC, and brand drugs; biologics</td>
</tr>
<tr>
<td>Company 1</td>
<td>Company 2</td>
<td>Merger Details</td>
<td>Date</td>
<td>Merger Value</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>----------------</td>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>Novartis (Switzerland) &amp; GSK (UK)</td>
<td>Novartis acquired GSK’s oncology business; GSK acquired Novartis’ non-influenza vaccine business, OTC joint-venture created</td>
<td>Mar. 2, 2015</td>
<td>$16 B (GSK oncology); $7.1 B (Novartis vaccine)</td>
<td>Oncology pipeline compounds, non-influenza vaccines</td>
</tr>
<tr>
<td>Mylan (NV) &amp; Abbott Laboratories (IL)</td>
<td>Mylan acquired Abbott</td>
<td>Feb. 27, 2015</td>
<td>$5.3 B</td>
<td>Generic drugs</td>
</tr>
<tr>
<td>Merck (NJ) &amp; Cubist Pharmaceuticals (NJ)</td>
<td>Merck acquired Cubist</td>
<td>Jan. 21, 2015</td>
<td>$8.4 B</td>
<td>Antibiotics (antibiotic-resistant disease focus)</td>
</tr>
<tr>
<td>Bayer (Germany) &amp; Merck (NJ)</td>
<td>Bayer acquired Merck’s OTC business</td>
<td>Oct. 1, 2014</td>
<td>$14.2 B</td>
<td>OTC consumer care</td>
</tr>
</tbody>
</table>

**Table 3 References:**

This table is not intended to provide an exhaustive list of mergers and acquisitions. Information was collected from results of a broad search of the press and corporate press releases conducted in July 2015.


ii Id.

iii Tova Cohen & Steven Scheer, Teva to Buy Allergan Generic Business for $40.5 Billion, Drops Mylan Bid, Reuters (July 27, 2015, 6:13 PM), http://www.reuters.com/article/us-teva-allergan-m-a-teva-pharm-idUSKCN0Q10QE20150727; see also Jessica Merrill, Teva Gets What It Wants - Allergan Generics, Not Mylan, The Pink Sheet 1, 4 (2015). Teva dropped its pursuit to acquire Mylan’s business to pursue this acquisition instead. Id. This acquisition will make Teva the world’s number 1 maker of generic drugs. Id.


A Profile of Bio-pharma Consolidation Activity


vii Actavis Completes Allergan Acquisition, supra note 208. This acquisition created one of the world's top 10 pharmaceutical companies by sales revenue, with anticipated revenue of more than $23 billion for 2015. Id. The deal was widely viewed as a move to block Valeant Pharmaceuticals International's hostile bid for Allergan. Kevin McCoy, Actavis Completes $66B Deal for Allergan, USA TODAY (Mar. 17, 2015, 1:09 PM), http://www.usatoday.com/story/money/business/2015/03/17/actavis-allergan-acquisition-completed/24897595/.


x Novartis Announces Completion of Transactions with GSK, supra note viii. GSK acquired Novartis' non-influenza vaccines business and a joint venture was created between Novartis OTC and GSK Consumer Healthcare. Novartis owns a 36.5% share of the joint venture. Id.


xvii Id. This is the second largest acquisition in Bayer's history. Mark Strobel, Further Industry Consolidation: Bayer Buys Merck & Co’s Consumer Health Unit, EUROMONITOR INTERNATIONAL (May 6, 2014), http://blog.euromonitor.com/2014/05/further-industry-consolidation-bayer-buys-merck-cos-consumer-health-unit.html.