UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION
OFFICE OF ADMINISTRATIVE LAW JUDGES

DOCKET NO. 9393

In the Matter of

ALTRIA GROUP, INC.
a corporation, and

JUUL LABS, INC.
a corporation,

Respondents.

INITIAL DECISION

D. Michael Chappell
Chief Administrative Law Judge

Date: February 23, 2022
(Original issue date of *in camera version*:
February 15, 2022)

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I. INTRODUCTION

A. Summary of the Case

The Complaint in this case, issued by the Federal Trade Commission ("FTC" or "Commission") on April 1, 2020, alleges that Altria Group, Inc. ("Altria") and JUUL Labs, Inc. ("JLI") (collectively, "Respondents") have executed agreements in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, Section 5 of the Federal Trade Commission Act ("FTC Act"), as amended, 15 U.S.C. § 45 ("Count I"), and Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18 ("Count II").[1]

Count I of the Complaint alleges an agreement whereby Altria agreed not to compete in the alleged United States electronic cigarette ("e-cigarette") market "now or in the future," in return for an ownership interest in JLI. Complaint ¶ 78. More specifically, the Complaint alleges that, during negotiations between Altria and JLI for Altria to take an ownership interest in JLI, JLI demanded that Altria "exit" the e-cigarette market as a "condition for any deal" and that "[i]n order to meet JLI's demand . . . Altria began taking steps to withdraw its e-cigarettes" from the alleged relevant market. Complaint ¶¶ 4-5, 77. The Complaint further alleges that as part of the investment transaction that Respondents completed on December 20, 2018 (the "Transaction"), Respondents agreed to a non-compete provision that, with certain exceptions, prevented Altria from competing in the alleged relevant market for the period of time post-Transaction during which Altria provided JLI with certain support services. Complaint ¶¶ 5-6, 22, 77. The Complaint charges that the foregoing agreement of Respondents unreasonably restrained trade in the alleged relevant market, "under a rule of reason analysis." Complaint ¶¶ 4-6, 12, 77-79.

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[1] Section 5(a)(2) of the FTC Act gives the Commission jurisdiction "to prevent persons, partnerships, or corporations . . . from using unfair methods of competition in or affecting commerce . . . ." 15 U.S.C. § 45(a)(2); *Kaiser Aluminum & Chem. Corp. v. FTC*, 652 F.2d 1324, 1327 n.2 (7th Cir. 1981). Section 11 of the Clayton Act vests jurisdiction in the FTC to determine the legality of a corporate acquisition under Section 7. 15 U.S.C. § 21(b); *In re R.R. Donnelley & Sons Co.*, 1995 FTC LEXIS 450, at *11 (July 21, 1995). Corporations are included within the definition of "persons" that are subject to jurisdiction under the Clayton Act, 15 U.S.C. § 12(a), and the FTC Act, 15 U.S.C. § 44. Respondents are both corporations, as "corporation" is defined in Section 4 of the FTC Act, 15 U.S.C. § 44. F. 1-2. Respondents' sales of e-cigarettes are in or affect commerce in the United States, as "commerce" is defined in Section 4 of the FTC Act, 15 U.S.C. § 44. F. 3, 4, 10. Thus, the Commission has jurisdiction over Respondents and the subject matter of this proceeding, pursuant to Section 5 of the FTC Act and Sections 7 and 11 of the Clayton Act, 15 U.S.C. § 18, 21(b).

Count II of the Complaint alleges that the Transaction, through which Altria obtained a 35 percent interest in JLI in exchange for a $12.8 billion investment in JLI, is unlawful under Section 7 of the Clayton Act. Complaint ¶¶ 6, 13, 80. More particularly, the Complaint alleges that Altria withdrew its e-cigarette products from the alleged market for the purpose of the Transaction and that this withdrawal of products from the market, as well as the non-compete provision restricting Altria's future competition, "substantially lessened competition" in the alleged relevant market. Complaint ¶ 81; *see also id.* ¶¶ 13, 19, 22, 80, 82.

On July 27, 2020, Respondents each filed an answer to the Complaint, together with asserted affirmative and other defenses ("Answer"). Respondents each deny entering into any unlawful agreement. Answer of JLI ¶¶ 4-6, 77-79; Answer of Altria, ¶ 4-6, 77-79. Respondents specifically aver that there was no agreement that Altria would withdraw products and that Altria made these decisions for independent reasons related to those products. Answer of JLI at 2-3; Answer of Altria at 1-2. Respondents further deny that the alleged agreement unlawfully restrained trade. Answer of JLI ¶ 12; Answer of Altria ¶ 12. Respondent Altria asserted sixteen affirmative and other defenses, including that FTC proceedings violate the United States Constitution. Answer of Altria pp. 20-22. Respondent JLI raised eighteen affirmative and other defenses, which are largely similar to those raised by Altria. Answer of JLI pp. 15-18.

Upon full consideration of the entire record, and as explained more fully below, the evidence fails to prove the alleged agreement between Respondents for Altria to remove its then-existing e-cigarette products from the market in exchange for entering into the Transaction with JLI. In addition, the evidence fails to prove that the non-compete provision, agreed to as part of the Transaction, unreasonably restrained future competition from Altria in the alleged e-cigarette market. Accordingly, the evidence fails to sustain the alleged violation of Section 1 of the Sherman Act, or Section 5 of the FTC Act, and Count I must therefore be DISMISSED.

Furthermore, upon full consideration of the entire record, and as explained more fully below, the evidence fails to demonstrate that either the removal of Altria's products, or the non-compete provision has substantially harmed or is reasonably likely to substantially harm competition in the alleged e-cigarette market. Thus, the evidence fails to sustain the claim that the Transaction has substantially lessened competition in the alleged e-cigarette market.

Accordingly, the evidence fails to sustain the alleged violation of Section 7 of the Clayton Act, and Count II must therefore be DISMISSED.

Based on the foregoing, the entirety of the Complaint will be DISMISSED.

B. Procedural Background

The evidentiary hearing in this matter, which began on June 2, 2021, was conducted over 13 days, and was completed on June 23, 2021. Thereafter, the parties submitted post-trial briefs, proposed findings of fact, and replies to each other's briefs and proposed findings of fact.[2]

The record in this matter consists of the testimony of a total of 37 witnesses, presented live or by deposition. Over 2,480 exhibits were also admitted into evidence.[3] Individuals referenced in this Initial Decision include current and/or former employees of Respondents, other e-cigarette manufacturers, and direct purchasers of e-cigarettes.

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[2] Rule 3.51(a) of the Commission's Rules of Practice states that "[t]he Administrative Law Judge shall file an initial decision within 70 days after the filing of the last filed initial or reply proposed findings of fact, conclusions of law and order . . . ." 16 C.F.R. § 3.51(a). The last replies to proposed findings of fact and conclusions and reply briefs were filed on October 13, 2021. Seventy days from the last filings would have been December 22, 2021. Absent an order pursuant to Rule 3.51, the Initial Decision was to be filed on or before December 22, 2021. Based on the voluminous and complex record in this matter, an Order was issued finding good cause for extending the time period for filing the Initial Decision by 30 days. By Order of the Commission issued January 18, 2022, good cause was found to further extend the deadline for filing the Initial Decision to February 17, 2022. Accordingly, issuance of the *in camera* version of this Initial Decision by February 17, 2022 is in compliance with Commission Rule 3.51(a).

[3] Pursuant to Commission Rule 3.45(b), several orders were issued in this case granting *in camera* treatment to material, after finding, in accordance with the Rule, that its public disclosure would likely result in a clearly defined, serious injury to the entity requesting *in camera* treatment or that the material constituted "sensitive personal information," as that term is defined in Commission Rule 3.45(b). In addition, when the parties sought to elicit testimony at trial that revealed information that had been granted *in camera* treatment, the hearing went into an *in camera* session. Commission Rule 3.45(a) allows the Administrative Law Judge ("ALJ") "to grant *in camera* treatment for information at the time it is offered into evidence subject to a later determination by the [administrative] law judge or the Commission that public disclosure is required in the interests of facilitating public understanding of their subsequent decisions." *In re Bristol-Myers Co*., 1977 FTC LEXIS 25, at *6 (Nov. 11, 1977). As the Commission later reaffirmed in another leading case on *in camera* treatment, since "in some instances the ALJ or Commission cannot know that a certain piece of information may be critical to the public understanding of agency action until the Initial Decision or the Opinion of the Commission is issued, the Commission and the ALJs retain the power to reassess prior *in camera* rulings at the time of publication of decisions." *In re General Foods Corp*., 1980 FTC LEXIS 99, at *12 n.7 (March 10, 1980). Thus, in instances where a document or trial testimony had been given *in camera* treatment, but the portion of the material cited to in this Initial Decision does not in fact merit *in camera* treatment, such material is disclosed in the public version of this Initial Decision, pursuant to Commission Rule 3.45(a) (the ALJ "may disclose such *in camera* material to the extent necessary for the proper disposition of the proceeding"). Where *in camera* information is used in this Initial Decision, it is indicated in bold font and braces ("**{ }**") in the *in camera* version and is redacted from the public version of the Initial Decision, in accordance with Commission Rule 3.45(e). 16 C.F.R. § 3.45(e).

This Initial Decision is based on a consideration of the whole record relevant to the issues and addresses the material issues of fact and law. The briefs and proposed findings of fact and conclusions of law, and the replies thereto, submitted by the parties, and all contentions and arguments therein were thoroughly reviewed and considered. Proposed findings of fact submitted by the parties that were not accepted in this Initial Decision were rejected, either because they were not supported by the evidence or because they were not dispositive or material to the determination of the merits of the case. Similarly, legal contentions and arguments of the parties that are not addressed in this Initial Decision were rejected, because they lacked support in fact or law, were not material, or were otherwise lacking in merit.

Ruling upon a decision of the Interstate Commerce Commission, and interpreting language in the Administrative Procedure Act ("APA") that is almost identical to language in Commission Rule 3.51(c)(1), the United States Supreme Court held that "[b]y the express terms of [that Act], the Commission is not required to make subordinate findings on every collateral contention advanced, but only upon those issues of fact, law, or discretion which are 'material.'" *Minneapolis & St. Louis Ry. Co. v. United States*, 361 U.S. 173, 193-94 (1959). *Accord Stauffer Labs., Inc. v. FTC*, 343 F.2d 75, 82 (9th Cir. 1965). *See also Borek Motor Sales, Inc. v. NLRB*, 425 F.2d 677, 681 (7th Cir. 1970) (holding that it is adequate for the Board to indicate that it had considered each of the company's exceptions, even if only some of the exceptions were discussed, and stating that "[m]ore than that is not demanded by the [APA] and would place a severe burden upon the agency"). Issues of fact or law that do not affect the result in a case are not fairly deemed "material," for purposes of Section 557(c)(3)(A) of the APA, 5 U.S.C. § 557(c)(3)(A), or Rule 3.51(c)(1) of the Commission's Rules of Practice, 16 C.F.R. § 3.51(c)(1), notwithstanding that there may be allegations or evidence presented on such issues. Rather, "a fact is only material if its resolution will affect the outcome" of the case. *Lenning v. Commer. Union Ins. Co.*, 260 F.3d 574, 581 (6th Cir. 2001) (summary judgment case). *See also Timpa v. Dillard*, 20 F.4th 1020, 1028 (5th Cir. 2021) (stating in a summary judgment case that "[a] fact is 'material' if it 'might affect the outcome of the suit under the governing law'") (*quoting Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)).

Furthermore, the Commission has held that Administrative Law Judges are not required to discuss the testimony of each witness or all exhibits that are presented during the administrative adjudication. *In re Amrep Corp.*, 1983 FTC LEXIS 17, at *566-67 (Nov. 2, 1983). In addition, all expert opinion evidence submitted in this case has been fully reviewed and considered. Except as expressly relied on or adopted in this Initial Decision, such opinions have been rejected, as either unreliable, unsupported by the facts, or unnecessary to the findings and conclusions herein.

Under Commission Rule 3.51(c)(1), "[a]n initial decision shall be based on a consideration of the whole record relevant to the issues decided, and shall be supported by reliable and probative evidence." 16 C.F.R. § 3.51(c)(1); *see In re Chicago Bridge & Iron Co.*, 2005 FTC LEXIS 215, at **8 n.23 (Jan. 6, 2005), *aff'd, Chicago Bridge & Iron Co. v. FTC*, 534 F.3d 410, 423 n.5 (5th Cir. 2008). The parties' burdens of proof are governed by Commission Rule 3.43(a), Section 556(d) of the Administrative Procedure Act, and case law. Pursuant to Commission Rule 3.43(a), "[c]ounsel representing the Commission . . . shall have the burden of proof, but the proponent of any factual proposition shall be required to sustain the burden of proof with respect thereto." 16 C.F.R. § 3.43(a). Under the APA, "[e]xcept as otherwise provided by statute, the proponent of a rule or order has the burden of proof." 5 U.S.C. § 556(d). The APA, "which is applicable to administrative adjudicatory proceedings unless otherwise provided by statute, establishes '. . . the traditional preponderance-of-the evidence standard.'" *In re Rambus, Inc.*, 2006 FTC LEXIS 101, at *45 (Aug. 20, 2006) (quoting *Steadman v. SEC*, 450 U.S. 91, 95-102 (1981)), *rev'd on other grounds*, 522 F.3d 456 (D.C. Cir. 2008).

Under the APA, an Administrative Law Judge ("ALJ") may not issue an order "except on consideration of the whole record or those parts thereof cited by a party and supported by and in accordance with the reliable, probative, and substantial evidence." 5 U.S.C. § 556(d). All findings of fact in this Initial Decision are supported by reliable, probative, and substantial evidence. Citations to specific numbered findings of fact in this Initial Decision are designated by "F."[4]

[4] References to the record are abbreviated as follows:

PX – Complaint Counsel's Exhibit
RX – Respondents' Exhibit

II. ANALYSIS

A. Summary of Relevant Background Facts

1. The Parties

Respondent Altria Group, Inc. ("Altria") is a for-profit corporation with its principal place of business in Richmond, Virginia. F. 1. Altria, a holding company, is the parent company of Philip Morris USA Inc., which is the largest cigarette company in the United States of America ("United States" or "U.S."). F. 4-5. Altria's operating subsidiaries are primarily engaged in the manufacture and sale of tobacco products in the United States. F. 7. From 2012 to 2018, Altria had an active operating company called Nu Mark LLC ("Nu Mark"), through which Altria developed and sold in the United States what are referred to as "innovative tobacco products," including electronic cigarettes ("e-cigarettes"). F. 8.

Respondent JUUL Labs, Inc. ("JLI") is a for-profit corporation with its principal place of business in Washington, D.C. F. 2. JLI manufactures and sells an e-cigarette known as "JUUL" (or "Juul"). F. 10.

2. E-cigarette Industry

a. Background

An e-cigarette is an electronic device that aerosolizes nicotine-containing liquid ("e-liquid") using heat generated by a battery. F. 15. When a consumer puffs on the device to inhale, the air flow passes over a puff sensor, which tells the sensor to communicate with the battery to release a charge. F. 18. The charge then heats a coil that is saturated in e-liquid. F. 18. The

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JX – Joint Exhibit
Tr. – Transcript of testimony before the Administrative Law Judge
Dep. – Transcript of Deposition
IHT – Transcript of Investigational Hearing
CCB – Complaint Counsel's Post-Trial Brief
CCRB – Complaint Counsel's Post-Trial Reply Brief
CCFF – Complaint Counsel's Proposed Findings of Fact
CCRRFF – Complaint Counsel's Reply to Respondents' Proposed Findings of Fact
RB – Respondents' Post-Trial Brief
RRB – Respondents' Post-Trial Reply Brief
RFF – Respondents' Proposed Findings of Fact
RRCCFF – Respondents' Reply to Complaint Counsel's Proposed Findings of Fact

e-liquid is atomized (vaporized), and vapor is inhaled by the consumer. F. 18. The terms "e-cigarettes" and "e-vapor" can be used interchangeably, and e-cigarette products can also be referred to as e-vapor products. F. 16.

There are two main types of e-cigarettes: open tank e-cigarettes and closed system e-cigarettes. F. 28. Open system devices consist of a battery, an e-liquid tank, a heating coil, and an atomizer. F. 36. Open system devices include a reservoir that a user can refill with an e-liquid of their choosing. F. 37. Open system e-cigarettes have the largest batteries of the various e-vapor product types, allowing them to generate more power, which produces larger plumes of vapor. F. 38.

Closed system e-cigarettes, also called closed systems, are comprised of a battery and a container that comes prefilled with liquid that contains nicotine. F. 29. Cig-a-likes and pod-based e-cigarettes (also referred to as pod products or pods) are closed tank systems. F. 30. A cig-a-like is narrow and tubular in shape, similar to a traditional cigarette, and is designed to emulate the look of a cigarette. F. 31. Pod products can vary in form. F. 34. Some pod products are rectangular. F. 34. Some pod products look like a USB flash drive or thumb drive. F. 34.

b. E-vapor Industry Participants

i. Altria/Nu Mark

Altria established its Nu Mark operating company in 2012 with the goal of developing and marketing innovative tobacco products, including e-cigarette products. F. 44. Nu Mark launched its first e-cigarette in 2013. F. 46, 57. The products sold by Altria in the United States included: (1) the MarkTen cig-a-like line of products, known as the MarkTen; the MarkTen XL,[5] which was a longer version of MarkTen; and the MarkTen Bold (collectively, "MarkTen" or "cig-a-likes"); and (2) the MarkTen Elite (referred to as "MarkTen Elite" or "Elite"), a pod-based e-cigarette.[6] F. 57-75.

[5] Nu Mark also sold a version of Mark Ten XL, mostly through e-commerce, under the brand Green Smoke. F. 64-65.

[6] Nu Mark also sold a limited number of a pod-product called Apex in ten states, only through e-commerce. F. 74-75.

On October 25, 2018, Altria announced that it was withdrawing its pod products from the market and discontinuing all non-traditional flavored cig-a-likes.[7] F. 649. On December 7, 2018, Altria announced it was discontinuing all Nu Mark e-vapor products, including the MarkTen line of cig-a-likes. F. 687. Nu Mark is closed as a business and no longer exists as an entity. F. 697.

ii. JLI

What is now known as JLI was founded in 2007 by Adam Bowen and James Monsees, two former graduate students at Stanford University. F. 76. JLI was originally incorporated as PLOOM, Inc. in 2007. F. 76. It was later renamed Pax Labs, Inc. F. 76. On June 30, 2017, Pax Labs renamed itself Juul Labs, Inc., and spun off certain assets and employees and other non-nicotine vaporizer products into a new company, Pax Labs, Inc. F. 76. JLI, operating under the name Pax Labs, launched JUUL in 2015. F. 77. JLI continues to sell JUUL today. F. 10.

iii. Reynolds

Reynolds American, Inc. ("Reynolds") participates in the e-vapor industry through a subsidiary, RJR Vapor Company. F. 80, 82. Reynolds is the second-largest tobacco company in the United States after Altria. F. 81. Reynolds currently sells four e-cigarettes under the "Vuse" brand: Vuse Solo, Vuse Ciro, Vuse Vibe, which are cig-a-likes, and Vuse Alto, which is a pod product. F. 82, 84, 86.

iv. ITG

ITG Brands, LLC ("ITG"), the third largest tobacco company in the United States, sells an e-cigarette product line under the brand name "blu," all of which are closed system e-cigarettes. F. 88, 91. ITG sells three types of closed system e-cigarettes: the *my*blu pod-based e-cigarette; the blu Plus+ cig-a-like; and the single-use blu Disposable, which is a cig-a-like. F. 92. ITG introduced the *my*blu pod product in 2017. F. 93.

[7] "Non-traditional flavors" is defined as all flavors other than tobacco, menthol, or mint. F. 621.

v. JTI

Japan Tobacco Inc. ("JTI") is a tobacco company that sells the Logic e-cigarette brand, which is a closed system product. F. 95-96. The Logic brand includes Logic Pro and Logic Power. F. 97. Logic also sells a pod-based product called Logic Compact. F. 97.

vi. NJOY

NJOY, LLC ("NJOY") is a privately held manufacturer of e-cigarettes, which is not affiliated with any traditional tobacco company. F. 99-100. NJOY currently sells a closed system pod product with a rechargeable battery called the NJOY Ace, launched by November 2018, and a closed system disposable cig-a-like called the NJOY Daily. F. 101-102. In 2018, NJOY also sold three cig-a-likes, with the names, Loop, PFT, and King. F. 103.

c. Rise of Pod-based Products and JUUL

Following the introduction of e-vapor products in the United States in the late 2000s, the category grew rapidly starting in 2011 as more convenience stores and tobacco shops began carrying the products. F. 19. In 2013, large tobacco companies, such as Reynolds and Altria, began acquiring and scaling up e-cigarette brands, fueling further growth. F. 20. In 2017 and 2018, the e-vapor category of tobacco products grew rapidly, specifically pod-based products, which was driven almost entirely by JLI's pod-based product, JUUL. F. 22-24. In December 2017, sales of JUUL overtook the then category leader, Reynolds' Vuse, which had led the category in 2016. F. 78. In 2018, JUUL was the best-selling e-cigarette in the United States and the market leader. F. 25.

With the rapid rise of e-cigarettes and the decline of traditional cigarette use, traditional tobacco companies invested heavily in e-cigarettes and other next-generation tobacco products as a key driver of future growth. F. 26-27.

3. The Challenged Transaction and Alleged Unlawful Agreement

As noted in the Introduction, the Complaint in this case includes two counts – Count I, alleging an unlawful agreement between Respondents, in violation of Section 1 of the Sherman

Act, and Count II, alleging an unlawful transaction in violation of Section 7 of the Clayton Act. The counts have some factual and analytical overlap, as described below.

At issue in the Section 7 claim is a transaction executed on December 20, 2018 by Altria and JLI (the "Transaction") pursuant to which Altria invested $12.8 billion in JLI in exchange for a 35 percent economic interest in JLI. F. 13, 949. In summary, in exchange for the investment, the Transaction provided Altria with the right to obtain voting shares and appoint one-third of JLI's directors (upon clearance of the Transaction pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976 ("HSR Act") antitrust review process);[8] imposed some restrictions on JLI's sale rights; and imposed some restrictions preventing Altria from acquiring control of JLI. F. 949. The executed final documents (the "Transaction Documents") included, among other documents, a "Relationship Agreement" and a "Services Agreement." F. 948, 950-951. A material part of Complaint Counsel's claim as to the anticompetitive effects of the Transaction is a non-compete provision, contained in the Relationship Agreement, through which Altria agreed "not to, directly or indirectly[,] . . . own, manage, operate, control, engage in or assist others in engaging in, the e-Vapor Business" for a period of six-years from the closing date, unless extended, to be concurrent with the expiration of the term of the related Services Agreement, under which Altria agreed to provide JLI with regulatory assistance, among other services. F. 951-953. As detailed further *infra*, Complaint Counsel contends that the non-compete provision has resulted in anticompetitive effects by eliminating future competition from Altria.

The non-compete provision in the Relationship Agreement is also alleged to be an illegal agreement in violation of Section 1 of the Sherman Act. Furthermore, Complaint Counsel contends that Respondents had an additional, unwritten, "side" agreement for Altria to cease competing with its then-existing products, manifested in (1) Altria's withdrawal of Elite and cessation of related development work on or about October 25, 2018; and (2) Altria's withdrawal of its MarkTen cig-a-likes and closing of its Nu Mark subsidiary on or about December 7, 2018. Collectively, Complaint Counsel characterizes the non-compete provision in the Relationship

[8] Under the HSR Act, parties to certain large mergers and acquisitions must file premerger notification and wait for government review. The parties may not close their deal until the waiting period outlined in the HSR Act has passed, or the government has granted early termination of the waiting period. https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers/premerger-notification-merger-review.

Agreement and the alleged agreement to withdraw Altria's e-vapor products and close Nu Mark, allegedly formed during the negotiations preceding the Transaction, as an anticompetitive agreement for Altria to "exit" the e-vapor market. Complaint Counsel claims that alleged anticompetitive effects from Altria's withdrawing its then-existing products, prior to the Transaction, also constitute anticompetitive effects of the Transaction.

4. Regulation of E-vapor Products

a. The Deeming Rule

The sale of e-cigarettes in the United States is regulated by the United States Food and Drug Administration (the "FDA"), as detailed in section III.H. of the Facts and summarized below.

Pursuant to statutory authority under the Tobacco Control Act, in 2016, the FDA issued a regulation that has come to be known as the "Deeming Rule." *See* 81 Fed. Reg. 28,974 (May 10, 2016). F. 195. The FDA declared that all e-vapor products (other than accessories) that met the Tobacco Control Act's definition of a "tobacco product" were subject to the FDA's authority under the Act, effective August 8, 2016. F. 195. Pursuant to the Deeming Rule, any e-vapor product that was not marketed legally as of February 15, 2007, is considered a "new tobacco product" subject to the requirement of FDA premarket review and approval. F. 196. The premarket tobacco product application is referred to as a PMTA. F. 193, 197. The FDA announced in connection with the publication of the Deeming Rule that the FDA would delay enforcement for several years for those products that were on the market as of August 8, 2016, to give manufacturers adequate time to prepare their PMTAs. F. 198. The deadline by which e-vapor manufacturers were to submit their PMTAs for their products on the market evolved, but ultimately was September 8, 2020. F. 249-254.

Because of the Deeming Rule, while manufacturers could acquire (or sell) product lines that existed as of August 8, 2016, they could not introduce new products into the market without going through the PMTA process. F. 199-200. Any new tobacco product that is required to have premarket authorization by the FDA and does not have such authorization is considered an

adulterated product. F. 207. Introducing adulterated products into the market is prohibited by statute and violations of this prohibition can result in both civil and criminal penalties. F. 207.

The FDA did not provide clear guidance under the Deeming Rule as to what changes a manufacturer could or could not make to a product without obtaining premarket authorization through the PMTA process, which created some uncertainty in the industry. F. 201. In connection with guidance issued for vape shops in January 2017, the FDA stated that "[m]odifying a product would generally result in a new tobacco product" requiring premarket authorization from the FDA. F. 202.

By requiring all existing e-cigarette manufacturers to secure PMTA approval from the FDA in order to keep their products on the market and effectively "freezing" the e-cigarette product offerings to those that existed on August 8, 2016, the Deeming Rule fundamentally shaped the e-vapor industry. F. 199.

b. Continuum of Risk

In July 2017, the FDA announced "a new comprehensive plan for tobacco and nicotine regulation that [would] serve as a multi-year roadmap to better protect kids and significantly reduce tobacco-related disease and death." F. 208. This was a significant policy announcement by the FDA. F. 208. The centerpiece of the FDA's new regulatory approach was a recognition that nicotine is delivered through products that represent a "continuum of risk" and is most harmful when delivered through smoke particles in combustible cigarettes. F. 209, 211. The objective of the policy was to try to move people down the continuum of risk, by helping smokers "migrate" from combustible products to noncombustible tobacco products. F. 210, 212.

On July 27, 2017, the FDA issued a statement indicating that it would tighten restrictions on cigarettes, while working to facilitate the success of innovative reduced-risk products, such as e-vapor, that could convert adult smokers away from combustible cigarettes and thereby promote overall public health. F. 213. The FDA statement noted that policies to "help smokers quit cigarettes" must also "protect kids" and that the FDA would therefore be assessing those two goals together, including by seeking input on the role that flavors in e-cigarettes "play in

attracting youth and may play in helping some smokers switch to potentially less harmful forms of nicotine delivery." F. 214.

c. PMTA Process

The PMTA process is an expensive, time-consuming process, described as "not dissimilar to . . . the process of getting a new [pharmaceutical] drug or a medical device on the market." F. 215. The details of this process are set forth in section III.H.4. of the Facts and summarized below.

To obtain FDA authorization for an e-vapor product pursuant to a PMTA, a manufacturer must demonstrate that the product is "appropriate for the protection of the public health." F. 216 (21 U.S.C. § 387j(c)(2)(A)). In determining whether a manufacturer has met this standard, the Tobacco Control Act requires the FDA to weigh: (1) "the risks and benefits to the population as a whole, including users and nonusers of tobacco products"; (2) the "likelihood that existing users of tobacco products will stop using such products"; and (3) the "likelihood that those who do not use tobacco products will start using such products." F. 218 (21 U.S.C. § 387g(a)(3)(B)(i)). The manufacturer must demonstrate that the product: (1) "reduce[s] the constituents of harm that smokers are taking in when they're smoking"; (2) "reduce[s] the risk" relative to other tobacco products; and (3) will actually "convert" smokers to e-vapor without having undue unintended effects on the non-tobacco-using population. F. 219. The standards for successfully obtaining a PMTA are rigorous. F. 220.

Demonstrating the potential for an e-vapor product to convert adult smokers away from combustible cigarettes is a necessary part of demonstrating that the product meets the "appropriate for the protection of public health" standard required for FDA approval. F. 219, 224, 263-265. It is not sufficient, in demonstrating conversion potential, to show that smokers are using both e-vapor and traditional cigarettes. F. 270. That is because, as Dr. William Gardner, a lead scientist in regulatory affairs at Altria explained, "unless consumers actually switch to the product, there is no reduction of risk." F. 270 ("They're just maintaining their cigarette consumption but adding something to it.").

The PMTA process requires a manufacturer to submit voluminous information. F. 221, 227; *see also* F. 226. The manufacturer must submit "full reports of all information," including that which is "known" or "should reasonably be known" to the applicant, "concerning investigations which have been made to show the health risks of such tobacco product and whether such tobacco product presents less risk than other tobacco products." F. 222 (21 U.S.C. § 387j(b)(1)(A)). In addition, manufacturers must produce, among other things, "a full statement of the components, ingredients, . . . and . . . principles of operation"; "a full description of the methods used in, and the facilities . . . used for, the manufacture" of the product; "samples of such tobacco product"; and "specimens of the labeling proposed to be used." F. 223. (21 U.S.C. § 387j(b)(1)(B), (C), (E), (F)). There is also a catchall provision requiring manufacturers to produce "such other information relevant to the subject matter of the application as the [FDA] may require." F. 223.

The product testing required for a PMTA takes "a significant amount of time and is a process that cannot be sped-up." F. 228. A PMTA requires completing multiple scientific studies, which generally cannot begin until a manufacturer has reached "design lock," meaning that it has achieved a design for the new product that is not going to change. F. 229. Design changes can cause delay and require repeating previous studies. F. 229. After a manufacturer has reached design lock in the development process, it takes approximately two years of scientific research to prepare a PMTA. F. 232; *see also* F. 233-234. After a manufacturer submits a PMTA, it takes years for the FDA to review the application and determine whether to approve the product. F. 257. Before the September 2020 deadline, the FDA received at least a half million PMTAs for e-vapor products. F. 259. Some of these applications have been pending for over two years. F. 259. As of the time of trial, no e-vapor product had been approved. F. 259.[9]

Conducting years of scientific studies for a PMTA is a significant expense. F. 235. Manufacturers must submit a PMTA for each product or stock keeping unit ("SKU") and the application can cost approximately $5 to $8 million per SKU. F. 236. Because product lines with different flavors and nicotine strengths can have ten or more SKUs, a PMTA for a single product line can cost from $50 to $100 million. F. 236. The PMTAs for JLI's JUUL products cost over

[9] On October 12, 2021, the FDA announced the first authorization of an e-cigarette product pursuant to a PMTA, which authorized Reynolds' Vuse Solo cig-a-like device and tobacco flavored cartridges. F. 261.

$100 million. F. 240. According to Altria's internal cost estimates, PMTAs would cost $89 to $104 million combined for the MarkTen cig-a-like products and $42 to $50 million combined for Elite and an improved Elite. F. 241. Other e-cigarette manufacturers that have submitted PMTAs report spending tens of millions of dollars. F. 237-239.

With the foregoing as background, the Analysis next turns to a determination of the relevant market.

B. Relevant Market

Count I of the Complaint alleges that Respondents entered into an agreement that unreasonably restrained trade in the United States market for e-cigarettes and that the agreement constitutes an unfair method of competition in violation of Section 5 of the FTC Act. Unfair methods of competition under Section 5 of the FTC Act include any conduct that would violate Section 1 of the Sherman Act. *California Dental Ass'n v. FTC*, 526 U.S. 756, 762 & n.3 (1999).[10] Under Section 1 of the Sherman Act, the evidence must prove that there was an agreement that "unreasonably restrained trade in the relevant market." *Realcomp II, Ltd. v. FTC,* 635 F.3d 815, 824 (6th Cir. 2011). Count II of the Complaint alleges that the Transaction violates Section 7 of the Clayton Act. Section 7 prohibits mergers or acquisitions "the effect of [which] may be substantially to lessen competition, or to tend to create a monopoly" in "any line of commerce or . . . activity affecting commerce in any section of the country." 15 U.S.C. § 18. The first step in evaluating whether an acquisition may substantially lessen competition in any "line of commerce" in any "section of the country" is to determine the "line of commerce" and the "section of the country"; in other words, to determine the relevant product market and the relevant geographic market. *United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1110 (N. D. Cal. 2004). Thus, both counts require a determination of the relevant market.[11]

[10] It is thus appropriate to rely on Sherman Act jurisprudence in determining whether the challenged conduct violates Section 5 of the FTC Act. *Polygram Holding, Inc. v. FTC*, 416 F.3d 29, 32 (D.C. Cir. 2005).

[11] The Complaint expressly alleges a Section 1 violation based upon a rule of reason analysis, Complaint ¶ 79, and Complaint Counsel confirms in its post-trial brief that it does not rely on a *per se* theory, CCB at 58 n.17. Accordingly, the relevant market must be assessed for purposes of the Section 1 claim, as well as the Section 7 claim. *Realcomp,* 635 F.3d at 825 (stating that under a rule of reason analysis, courts "engage in a thorough analysis of the relevant market and the effects of the restraint in that market").

"The 'relevant product market' identifies the product and services with which the defendants' products compete," while "the 'relevant geographic market' identifies the geographic area in which the defendants compete in marketing their products or services." *FTC v. CCC Holdings*, 605 F. Supp. 2d 26, 37 (D.D.C. 2009). Complaint Counsel bears "the burden of proving a relevant market within which anticompetitive effects are likely . . . ." *Id.*

1. Geographic Market

As stipulated by the parties, the relevant geographic market in this case is the United States. F. 171.

2. Product Market

The relevant product market alleged in the Complaint is closed system e-cigarettes. Complaint ¶ 36. Complaint Counsel asserts that closed system e-cigarettes are distinct from open tank systems and that the closed system e-cigarettes market includes both cig-a-likes and pod-based products. Respondents do not dispute that open tank systems are distinct from closed system e-vapor products. RRCCFF 351-83. Instead, Respondents assert that cig-a-likes and pod-based devices are not close substitutes for each other and should not be lumped together into a single product market. As explained below, the relevant product market in this case is a closed system e-cigarettes market that includes both cig-a-likes and pod-based products.

a. Legal Standards

A relevant product market consists of "products that have reasonable interchangeability for the purposes for which they are produced – price, use and qualities considered." *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 404 (1956). "Defining a relevant product market is primarily a process of describing those groups of producers which, because of the similarity of their products, have the ability – actual or potential – to take significant amounts of business away from each other." *Polypore Int'l, Inc. v. FTC*, 686 F.3d 1208, 1217 (11th Cir. 2012).

Case law identifies and relies on "practical indicia" of market definition such as industry or public recognition of the market as a separate economic entity, the product's peculiar

characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors. *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). *See, e.g., FTC v. Staples*, 970 F. Supp. 1066, 1075-80 (D.D.C. 1997); *FTC v. Cardinal Health*, 12 F. Supp. 2d 34, 46-48 (D.D.C. 1998); *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 159-64 (D.D.C. 2000).

Market definition must "take into account the realities of competition." *FTC v. Whole Foods Mkt.*, 548 F.3d 1028, 1039 (D.C. Cir. 2008). Ordinary course of business documents reveal the contours of competition from the perspective of the parties, who may be presumed to "have accurate perceptions of economic realities." *Whole Foods*, 548 F.3d at 1045 (concurring op.) (quoting *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 n.4 (D.C. Cir. 1986)). Thus, in determining the relevant product market, courts pay "close attention to the defendants' ordinary course of business documents." *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 52 (D.D.C. 2011).

Courts may also rely on testimony from experts in the field of economics to support a relevant product market. *United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 21 (D.D.C. 2017); *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 33 (D.D.C. 2015). Complaint Counsel's expert witness, Dr. Dov Rothman, conducted the hypothetical monopolist test described in the 2010 U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines ("Merger Guidelines") and determined that open tank e-cigarettes and other alternative nicotine products are not in the relevant product market because they are not close enough substitutes to prevent a hypothetical monopolist from profitably imposing a small but significant and non-transitory increase in prices ("SSNIP") on one or more of the merged firm's products. PX5000 (Rothman Expert Report ¶¶ 78-82). Dr. Rothman did not analyze whether pods and cig-a-likes could constitute distinct markets within a closed system e-cigarette market. PX7048 (Rothman Trial Dep. at 14, 128); *see also* Murphy Tr. 3114 (explaining that Dr. Rothman "didn't do anything [in his initial report] dealing with the question of whether it was appropriate to think about a smaller market or, equivalently, whether it was important to think about differential rates of substitution between pod-based and cigalikes"). Dr. Rothman's hypothetical monopolist test is not probative of the extent to which consumers will substitute from pods to cig-a-likes or vice-versa. RX1217 (Murphy Expert Report ¶¶ 100-06). While Complaint Counsel's expert witness' opinion supports

the uncontested proposition that open system products are not in the relevant product market, the opinion does not address whether cig-a-likes and pods are in the same relevant market. Therefore, based on the evidence contained in the record, only practical indicia and ordinary course of business documents will be evaluated to determine the contours of the relevant product market.

b. *Brown Shoe* Practical Indicia and Ordinary Course of Business Documents

The "practical indicia" identified by the Supreme Court in *Brown Shoe* and Respondents' ordinary course of business documents support the conclusion that the relevant product market in the instant case is closed system e-cigarettes, which encompasses both cig-a-likes and pod-based products.

i. Products' Peculiar Characteristics

Cig-a-likes and pod-based products are both closed system e-vapor products. F. 30. They share distinct product features, provide similar user experiences, and offer similar ease of use and convenience. F. 106-107. Cig-a-likes and pod-based products are both comprised of a battery and a container that comes prefilled with liquid that contains nicotine. F. 113-114. The factory-sealed e-liquids that are used in cig-a-likes and pod-based products have similar chemical characteristics; some may, or may not, contain nicotine salts; and the liquids can have an array of nicotine strengths and can come in a variety of options in terms of flavors. F. 113, 115-117. Battery power influences the amount of vapor that is produced in a puff when a user inhales the product. F. 119. The size or strength of the batteries used in cig-a-likes and pod-based products depends on the particular product. Generally, pod-based products are larger than cig-a-likes, which means they can use larger and more effective batteries. F. 118. However, the Vuse Vibe, a cig-a-like within Reynolds' Vuse product line, has the largest capacity cartridge and the longest-lasting battery. F. 121.

One clearly distinguishable product feature between cig-a-likes and pod-based products is shape. Cig-a-likes are typically round (or cylindrical) and look similar to cigarettes. F. 31, 123-124. Pod-based products are typically rectangular and look similar to a USB thumb drive or flash drive. F. 34, 125-127.

ii. Distinct Customers

The difference in shape between cig-a-likes and pods is far more than just an aesthetic issue. F. 128. Cig-a-likes' resemblance to a traditional cigarette means that the cig-a-like form carries some of the stigmas associated with smoking a cigarette. F. 129. Cig-a-like consumers are generally older and want a product that looks and feels similar to a cigarette. F. 130. Pods are used more by the "younger adult cohorts" who want something that looks different than a cigarette. F. 131.

iii. Specialized Vendors

Cig-a-likes and pod-based products are sold through the same market channels, primarily through the multi-outlet convenience channel, which includes conventional convenience stores, supermarkets, and various other outlets where cigarettes are sold. F. 132. In many instances, cig-a-likes and pod-based products are displayed in convenience stores on adjacent shelves. F. 135. *See also* F. 134 (Nu Mark's 2018 three-year strategic plan included a plan for future merchandising shelf space showing both its pod-based Elite and its MarkTen cig-a-likes displayed on adjacent shelves.).

iv. Distinct Prices and Sensitivity to Price Changes

In evaluating the *Brown Shoe* factors of "distinct pricing" and "sensitivity to price changes," evidence of the development of "pricing and business strategy with [a particular] market and those competitors in mind" is "strong evidence" of the relevant product market. *H&R Block*, 833 F. Supp. 2d at 51, 53. *See, e.g.*, *Swedish Match*, 131 F. Supp. 2d at 165 (holding that the product market for loose leaf tobacco did not include moist snuff because, among other factors, "loose leaf pricing is determined upon the basis of competition with other loose leaf products, not moist snuff"); *FTC v. Coca Cola Co.*, 641 F. Supp. 1128, 1133 (D.D.C. 1986) (stating that evidence that soda concentrate companies "make pricing and marketing decisions based primarily on comparisons with rival carbonated soft drink products, with little if any concern about possible competition from other beverages," shows that carbonated soft drinks is a relevant product market).

As summarized below, the evidence shows that when JLI and Altria, as well as other e-cigarette sellers, assessed their competitive landscape, they focused on all competitive closed system e-cigarette products, including both cig-a-likes and pod-based products. F. 137-166. Numerous JLI documents show that before Altria launched MarkTen Elite, its first pod-based product, in early 2018, JLI tracked Altria's e-cigarette business, which consisted solely of cig-a-likes at that time, including market shares, prices, and product characteristics, and considered MarkTen cig-a-likes to be a significant competitor. F. 137-150. After Altria launched MarkTen Elite in February 2018, JLI continued to track MarkTen cig-a-like products and often did not distinguish between the two Altria products. F. 142-145. For example, in several 2018 documents shared with investors, JLI compared its JUUL product with both MarkTen cig-a-likes and the MarkTen pod product. F. 144, 149. Furthermore, JLI has viewed as its primary competitors all other major closed system e-cigarettes – not only pod-based products, but also cig-a-likes. F. 137-145. For example, a 2018 JLI investor presentation included a slide tracking "competitive [product] launches," which listed both cig-a-likes (*e.g.*, MarkTen Bold, Vuse Ciro, and Blu Plus) and pod-based products. F. 149.

Similarly, Altria, which before 2018 did not have any pod-based products, viewed cig-a-likes and pod-based products as competing in the same market. F. 152-158. For example, the market share figures Altria presented to its Board of Directors in February 2017, before MarkTen Elite or Vuse Alto were introduced, included JUUL's pod-based products and Vuse and MarkTen cig-a-likes. F. 154. A three-year strategic plan draft that was sent to Altria's Chief Executive Officer ("CEO") in February 2018 compared the pricing for the MarkTen Elite pod-based product against both the JUUL pod-based product and two cig-a-likes in a single chart. F. 157.

Other closed system e-cigarette producers also consider the market for closed system e-cigarettes to encompass both cig-a-likes and pod-based products. F. 159-166. Reynolds views the competitive set for its Vuse cig-a-like products as including both pods and cig-a-like products and views the competitive set for its Vuse pod-based products as the other pod-based and cig-a-like products that are on the market. F. 159-160. NJOY also views cig-a-likes as competing with pod products, in that they compete for the same customers, adult smokers and adult vapers who frequent the convenience store channel. F. 164.

However, although manufacturers of e-cigarettes viewed cig-a-likes and pod-based products as competing in the same market, they typically do not decide how to price their pod products by comparison to cig-a-likes, or decide how to price their cig-a-likes by comparison to pod products. F. 151, 162-163, 165-166. According to Bob Robbins, JLI's Chief Growth Officer, JLI never changed its pricing or its promotions of JUUL, a pod-based product, "as a result of cig-a-like competition." F. 151. Similarly, Reynolds adopts different pricing decisions for its pod-based products and its cig-a-likes. F. 162. [redacted] F. 163.

v. Industry or Public Recognition of the Submarket as a Separate Economic Entity

In evaluating industry or public recognition of the submarket as a separate economic entity, courts pay "close attention to the defendants' ordinary course of business documents" because they "reveal the contours of competition from the perspective of the parties," who "may be presumed to have accurate perceptions of economic realities." *Aetna*, 240 F. Supp. 3d at 21; *see also H&R Block*, 833 F. Supp. 2d at 52-53 (concluding that the merging parties' documents were "strong evidence" of the relevant product market); *Coca-Cola*, 641 F. Supp. at 1132 (observing that market definition "is a matter of business reality – a matter of how the market is perceived by those who strive for profit in it"). Numerous ordinary course of business documents of Respondents consistently show that both Altria and JLI tracked market shares, sales volumes, and other key competitive metrics in an overall closed system e-cigarette market that included both cig-a-likes and pod-based products. *E.g.*, F. 137-150, 153-158.

In addition, the non-compete provision of the Relationship Agreement to which Altria agreed as part of the Transaction, prohibits Altria from competing in the "e-Vapor business." F. 170. As defined in the Relationship Agreement, the "e-Vapor business" includes both cig-a-like and pod products. F. 170.

The FDA's regulatory provisions governing e-cigarettes, which the FDA sometimes refers to as electronic nicotine delivery systems ("ENDS"), show public recognition of a closed

system e-cigarette market that includes both cig-a-likes and pod-based products. As defined by the FDA, ENDS encompasses "all e-vapor products." F. 17, 168. The FDA's definition of "a closed e-cigarette is an e-cigarette that includes an e-liquid reservoir that is not refillable, such as a disposable cigalike, or that uses e-liquid contained in replaceable cartridges or pods that are not intended to be refillable." F. 167. The FDA's flavor ban, which went into effect in February 2020, removed non-tobacco, non-menthol flavors from closed system e-cigarettes and applied to both cig-a-likes and pod-based products equally. F. 169.

3. Conclusion

The differences in the shapes of the devices is significant in that pods appeal to different customers (younger consumers). However, considering the facts that the parties to the Transaction defined "e-Vapor business" to include both cig-a-like and pod products and that the FDA's regulations of ENDS applies to both cig-a-likes and pods, the greater weight of the evidence favors finding a single market that consists of both cig-a-likes and pod-based products. While the rising popularity of pods means that pods' share in this market is increasing (discussed *infra*), this does not dictate a conclusion that pods and cig-a-likes are not in the same product market. For the above stated reasons, the relevant market in this case is the sale in the United States of closed system e-cigarettes, which encompasses both cig-a-likes and pod-based products.

C. Summary of Relevant Chronology

1. April 2017 – April 2018

a. Launch of Elite

As detailed in the Facts, section III.I., and summarized below, Altria acquired Elite in February 2018 in order to compete with pod-based e-vapor products, whose sales and market share were growing quickly, while cig-a-likes had rapidly declining sales and market share.

i. Acquisition of Elite

Between 2016 and the end of 2017, sales of pod products increased by over 600 percent, driven largely by JUUL. F. 294. At the same time, sales of cig-a-likes, which were Nu Mark's

only e-vapor products at the time, were contracting, with volume dropping by some 5,800,000 units in 2017 compared to the prior year. F. 294-295. The share of cig-a-likes in the e-vapor market, which exceeded 70 percent in January 2016, dropped to 36 percent by January 2018, while the share of pod-based products grew to 58 percent in that same time period. F. 293, 524. By mid-November 2017, Altria's budget projections for 2018 predicted that the pod-based market segment would grow by 55 million units sold in the multi-outlet convenience channel, compared to the latest estimate for 2017, and that sales of cig-a-like products and open system products would collectively decline by 25 million units, due to the growth in sales of pod products. F. 699.

By November 2017, JUUL was growing rapidly in both volume and market share and was the fastest growing product in the e-vapor category. F. 700. In December 2017, sales of JUUL overtook the then category leader, Reynolds' Vuse, which had led the category in 2016. F. 78, 85. The lack of a pod product was a significant gap in Nu Mark's portfolio. F. 296. As explained by Craig Schwartz, then Nu Mark's Senior Vice President of Operations, the cig-a-like category was "declining very quickly. The pod business was growing exponentially, driven by JUUL. And . . . [Altria was] getting [its] butt kicked week in and week out." F. 296. However, to market an e-vapor product legally under the Deeming Rule, the product had to have been on the market prior to August 8, 2016. F. 196, 199-200. Altria could not, in 2017, develop and bring to market a pod-based product of its own. F. 297. In order to sell a pod product to compete with JUUL, Altria would have to acquire a pod product that had been on the market prior to August 8, 2016. F. 297.

In the spring of 2017, Altria launched what it called "Project Mule," which was a project for pursuing potential acquisitions of pod-based products. F. 298. Altria's strategy & business development ("S&BD") group, working with Jody Begley, then head of Nu Mark, identified six potential pod products and associated companies that were considered for potential acquisition: the k-stick, by Kangertech; Bo, by J Well; Cync, by Vape Forward, NEX Elite, by Smoore Shenzhen Technology ("Smoore"); My, by Von Erl; and Juul, by Pax Labs (which later became JLI). F. 299. S&BD concluded based on its research that only two of the six companies presented attractive options for acquisition, JUUL and Von Erl, with Pax Labs' JUUL being the number one choice, followed by Von Erl. F. 299.

In 2017, Altria viewed JLI, then known as Pax Labs, as the most promising acquisition in the burgeoning market for pod-based devices. F. 299, 703. In April 2017, Altria had an initial discussion with JLI about a possible acquisition; however, the parties did not progress past the exploratory phase. F. 301. In the spring of 2017, S&BD submitted an investment proposal to Von Erl. F. 302. However, Von Erl made a deal with another company. F. 302.[12]

Based on marketplace and consumer dynamics, Altria concluded that there was an urgent need to compete beyond the cig-a-like category and to compete in the pod-based product space. F. 310. Thus, in late June 2017, the e-vapor product team at Nu Mark began to explore a possible investment in NEX Elite, a product developed and manufactured by a Chinese company called Smoore, which S&BD had previously considered but had not included as a potentially attractive acquisition option. F. 303. Nu Mark completed a deal to license the exclusive right to commercialize NEX Elite from Smoore in late October 2017, for a sum of $500,000. F. 304.

Nu Mark's 2018 three-year strategic plan depended heavily on Nu Mark's having successful pod-based products. F. 315. Nu Mark hoped to sell 11 million units of pod products in 2018 and anticipated that by 2019, pod products would account for the majority of its volume, while cig-a-like volume rapidly declined. F. 315. The plan further assumed that, with strong pod sales, Nu Mark's overall sales volume would grow by between 20 to 30 percent year over year. F. 315. Based on the assumptions in Nu Mark's 2018 three-year strategic plan, Nu Mark projected it would lose $70 million in 2018, followed by a $24 million loss in 2019, before hopefully turning a profit in 2020. F. 316.

ii. Rollout of Elite

After Altria acquired rights to Elite in October 2017, Nu Mark worked to launch Elite as quickly as possible. F. 309. Nu Mark originally targeted a May/June 2018 launch for Elite, but at the urging of management, Nu Mark's operations team developed plans to accelerate the launch from May to February 2018. F. 312. Elite was launched on February 26, 2018. F. 329. Normally,

[12] Von Erl was acquired by Imperial, the corporate owner of ITG, which subsequently relaunched Von Erl's products under a new brand name, *my*Blu. F. 302.

commercializing a product can take a year or more. F. 311. Altria brought Elite to market with "exceptional speed," with only a four-month period between obtaining a license to sell Elite and its retail launch. F. 313. Altria's launch of Elite was well-funded because the company wanted to get Elite out on the market as quickly and effectively as possible. F. 330.

The launch of Elite was complicated by Elite's pervasive leaking. Although leaking was common to many pod-based e-cigarettes, leaking issues "were certainly worse with some [products] than others" and, in comparison with other pod products, Elite's leaking was "much more pervasive." F. 484, 490. JLI's Joseph O'Hara, Director of Regulatory Strategy, recalled that the day Elite launched, he ordered "a large number of samples, and when those samples arrived to [him], every single one of those samples was leaking in the packaging, as well as whenever [he] tried to use them, they would then leak . . . in [his] mouth." F. 487. A consumer opening an Elite package "would see literally fluid inside the pod in the package . . . . And in some cases, the leaking was so bad" it could be seen "on the outside of the carton" that had been used to ship the products to the retail store. F. 488. A March 2018 Altria document reported that two employees and two other individuals purchased eleven packs of Elite products and out of those eleven packs, seven had at least one pod that leaked, and leaked more than a couple of drops. The document further reported that three of the four people that purchased Elite "also reported liquid dripping into their mouths when using the product." F. 489. One study referenced in an April 2018 internal Nu Mark e-vapor update showed that at times, over 40 percent of Elite's pods leaked. F. 486.

The leaking issue, while eventually addressed (F. 503-518), adversely affected Elite's reputation in the market with retailers and consumers. F. 492-501. Consumers were "turned off by the fact" that Elite pods were leaking. F. 498. Altria received complaints from consumers and retailers regarding the leaking pods. F. 492. Some wholesalers and retailers expressed concern that Elite was "defective." F. 494. First impressions of a product are important and Elite's leaking was unhelpful in trying to get Elite "off the ground." F. 495. As Begley explained, "it's hard to undo [consumers'] first perception of the brand." F. 496. If a consumer purchases a product that "leaks heavily . . . they aren't likely to repurchase that product." F. 497; *see also* F. 496 ("Pod leakage [is] a very primary constraint. If the pods aren't themselves functioning

properly, you won't have promotional effectiveness."). In July 2018, JLI had concluded that Elite's "excessive leakage ha[d] significantly (perhaps irreparably) damaged the brand." F. 501.

iii. Promotions and Sales Performance of Elite

Altria invested in significant promotions to sell Elite. F. 335. The goal of the promotions was to incentivize a "trial" – to get consumers to try the device in the hope that they would return for pods, akin to the razor/razor blade model. F. 336. These promotions included bundling the device and a pack of pods together for a single discounted price, including one such promotion that effectively gave away the device for free. F. 337-340. Another promotion was a store intercept program in which Altria employees physically went to stores and handed out $10-off coupons for Elite to consumers. F. 341. Because the coupons could be used together with the device bundle promotion, a consumer could get both the pods and the battery device for free. F. 341. There was also a clerk incentive program, whereby if a clerk at a store sold 25 devices, the clerk could receive $500 for the employees of the store. F. 342. Nu Mark did not pay out the $500 incentive very often. F. 342.

Where promotions worked to incentivize some sales, ending the promotions tended to substantially decrease sales. F. 345. Moreover, promotions for devices and pods failed to be followed by an increase in sales of additional pods, which indicates that consumers were not adopting the product. F. 346-347. For example, an $8.99 bundle promotion for a device and any pod ran at retailer Sheetz from May 20, 2018 until September 30, 2018, which lead to a spike in device sales at Sheetz. However, there was no corresponding rise in sales of pods. F. 346. Pod sales are an important indicator of future product success because they indicate that consumers are continuing to use the product. F. 347.

After its first eight weeks on the market, Nu Mark was selling 7.2 Elite pods per week per Sheetz store which, with two pods to a pack, translates to roughly a pack sold every other day. F. 352. In May 2018, Nu Mark was selling just one Elite pack every other day at Sheetz. F. 352. In this regard, as William ("Billy") Gifford, Altria's CEO, testified, Elite's initial performance was "nothing compared to what you would expect when you're trying to disrupt the consumer and trying to get a consolidated group of consumers to engage with the brand . . . ." F. 351. At 7-Eleven, Altria's largest retailer, only about 20 percent of stores were reordering Elite after the

first four to six weeks after its launch. F. 353, 359. By June 2018, more than half of 7-Eleven stores carrying Elite "had yet to sell a single pod." F. 354. Scott Myers, then an Altria Regional Vice President, found Elite to be the "worst" performing product rollout that he had worked on in his 24 years of experience with Altria. F. 362.

b. PMTA Concerns

i. Conversion Potential

Conversion potential is the potential of an e-vapor product to convert adult smokers away from combustible cigarettes and is an important factor that the FDA considers when determining whether to approve a premarket tobacco product application for an e-vapor product. F. 219, 263-265. As explained by Dr. Gardner, proof of conversion potential is "necessary to demonstrate" that an e-vapor product meets the "appropriate for the protection of public health" standard for FDA approval. F. 265. "[I]f adult smokers don't convert to the product, you're not reducing harm to the population and to the adult smokers," and from a regulatory perspective, "the product had no reason for being in the market." F. 266. Conversion potential is related to nicotine satisfaction. F. 267. Smokers who are looking to switch to an e-vapor product need the product to provide nicotine satisfaction. F. 267.

By early 2015, it was clear to Nu Mark's leadership, including Joe Murillo, then President and General Manager of Nu Mark, that "cig-a-like products were not going to be of sufficiently deep and broad appeal . . . to convert large numbers of [smokers]." F. 291. For many smokers and vapers, cig-a-likes were underpowered and ineffective at delivering sufficient nicotine satisfaction. F. 292. A six-week home use test undertaken for Elite in late 2017 indicated that Altria's pod-based product also was not offering the necessary nicotine satisfaction to be adopted by cigarette users. The home use test showed that consumers were not replacing smoking sessions with Elite in statistically significant numbers, and that Elite did not perform as well with consumers seeking the smoking sensation, as opposed to vaping. F. 323-324, 327-328.

In addition, low sales rate is an indication that the product does not have the potential to convert smokers. F. 415. Sales data "tells you . . . what the adult smokers are actually doing in the market with their money." F. 414. "If consumers don't like [a product], they're not going to

convert." F. 415. As noted above, cig-a-like sales were in steep decline, and Elite's rollout sales were disappointing, raising doubt about the ability of those products to convert smokers.

ii. Technical Problems with Products

Testing on the MarkTen cig-a-like in 2017 indicated that the battery in the device had a tendency to overheat, causing what is referred to as "dry puffing." F. 398-399. Dry puffing is a phenomenon that occurs when a closed system's cartridge begins to run out of e-liquid at the end of its life. F. 394. The remaining e-liquid overheats, which results in the generation of aldehydes, particularly formaldehyde, a carcinogen. F. 394-396.

Dry puffing does not present an acute health risk. F. 400. However, the discovery of dry puffing with the MarkTen cig-a-like did create a regulatory concern within Altria as to whether the dry puffing issue would hinder Altria's ability to obtain FDA approval for the MarkTen cig-a-likes. F. 400. Although the FDA has not specified a numerical level for formaldehyde that is acceptable for e-vapor products, there must be a showing of reduced risk compared to conventional cigarettes, and it would be difficult to demonstrate risk reduction if the levels of formaldehyde in the e-vapor product were similar to cigarettes. F. 397. Altria determined that fixing the MarkTen cig-a-like's dry puff issue would require making fairly significant changes to the product and that Altria would therefore have to delay its planned PMTA filing pending these changes. F. 401. As of March 2018, Altria's regulatory group described the status as "delayed – date TBD." F. 401.

When Altria acquired rights to commercialize Elite in the fall of 2017, Elite lacked dry puff prevention technology, and therefore, Elite had the potential for formaldehyde generation. F. 411. ("Elite . . . was missing the temperature control feature that [Altria] had come to deeply appreciate was critical to reducing formation of certain constituents that are of concern, including formaldehyde."). Initial scientific testing of Elite's formulations conducted in December 2017 indicated that some "devices delivered low aerosol mass and high formaldehyde results." F. 412. In addition, in early 2018, Altria determined that a half-dozen components of Elite would need to be replaced, which led Altria to "conceptualize" a redesigned version of the product. F. 385. The version of Elite that was to incorporate certain fixes to the version of Elite that was launched in 2018 was referred to internally at Altria as Elite 2.0. This contemplated changed version of Elite

would also require a PMTA. F.386, 388. In March 2018, Altria knew that Elite, both the version then on the market, and the future version, needed to be modified and redesigned, and that this would delay PMTA work and a PMTA filing. F. 389.

c. April and May 2018 Discussions between Altria and JLI

After Altria's unsuccessful initial acquisition approach to JLI in April 2017, Altria and JLI had additional exploratory discussions. F. 301, 721-728. Prior to April 2018, these discussions were general and unstructured, with a focus on Altria's learning more about JLI's business and understanding how a deal might be structured to work together. F. 729.

In the spring of 2018, Altria and JLI began discussing potential deal structures. F. 730. Altria typically wants control of a company when it negotiates an acquisition. F. 731. By April 2018, Altria was prepared to accept less than 100 percent control, and negotiations in April and May 2018 were focused on whether Altria would acquire a majority of JLI's domestic business. F. 732-752. JLI was not willing to enter a transaction where Altria had control of JLI, or a path to control. F. 751. JLI was also concerned as to "how cumbersome" it would be to divide JLI into domestic and international companies and whether "the value of the international company [would] be diminished in a transaction where the two were split." F. 752.

Moreover, during the April and May 2018 time period, JLI and Altria were "not very close" on their views of JLI's valuation. F. 750. *See also* F. 738, 745-746, 749. Around the April 2018 time period, JLI's revenue was growing by approximately 30 percent per month. F. 750. JLI believed that Altria's valuations of JLI "always seemed to be a little bit behind the curve." F. 750. By the time Altria would propose a number, "the value of JUUL had jumped ahead of that" number. F. 750. By May 30, 2018, Altria was proposing a series of upfront and milestone payments, totaling up to $11 billion, in exchange for 50.1 percent of JLI. F. 749.

JLI understood from the outset of discussions with Altria that a transaction such as that being contemplated by JLI and Altria would be closely scrutinized by regulatory agencies. F. 741. Altria and JLI negotiators did not have any discussions about what Altria would do with its then-existing e-cigarette products until after Altria moved away from seeking to purchase 100% of JLI and toward a partial acquisition. F. 732, 735. In April 2018, the parties planned that

JLI's and Altria's respective antitrust counsel "would discuss and develop a plan with respect to seeking and obtaining regulatory approval for the majority investment, including the treatment of any competitive products owned by Altria." F. 740.

Ultimately, while there was some "back and forth" during the April and May 2018 time period, the effort was "not really leading anywhere." F. 743. The next substantive effort to negotiate a deal did not occur until late July 2018, which is discussed below.

2. May 2018 – August 2018 Internal Assessments of Nu Mark

As explained in II.C.1 above, cig-a-like sales were declining, Altria's only pod product had a poor rollout, and Altria's PMTA prospects were delayed while it addressed technical problems with its e-vapor products. Whether Altria could demonstrate that its products had conversion potential also put Altria's PMTA prospects in jeopardy. Accordingly, beginning in the spring of 2018, Altria undertook a detailed assessment of its products in hopes of discovering how to turn the Nu Mark business around. The results, detailed in sections III.K.1. and 2. of the Facts and summarized below, were discouraging.

a. Corporate Restructuring

In May 2018, Howard Willard became Altria's CEO and restructured its leadership. F. 526, 528, 530, 536-538. Willard restructured the company into two divisions, core tobacco and innovative products. F. 528. For the innovative products division, Willard hoped "to change [Altria's] approach on innovation to have a better chance to fulfill [its] aspiration of being the . . . leader in noncombustible reduced-risk products." F. 527. Willard appointed Brian Quigley, who had previously run Altria's smokeless tobacco business, as the new CEO of Nu Mark. F. 530. Quigley's task was to "go in and assess the strengths and, frankly, the weaknesses of the Nu Mark business and to make an assessment in his judgment on whether or not there were opportunities to make adjustments that would deliver greater success." F. 531. Willard believed that if there were opportunities to turn Nu Mark around, Quigley would likely be well positioned to identify them. F. 532. Quigley understood that he was taking over a business that was "struggling and underperforming," and that his directive was to figure out what was wrong and to come up with "the best plan" that he could to "turn around" Nu Mark. F. 534.

Willard also appointed K.C. Crosthwaite as Chief Growth Officer and tasked him with building and acquiring the competencies, technologies and talent that Altria would need to achieve its innovative products aspiration. F. 536. On the regulatory side, because commercializing new products was contingent on FDA approval and to coordinate regulatory strategy with the scientific agenda, Willard moved Altria's Regulatory Sciences division under the supervision of Murray Garnick, Altria's General Counsel and head of Regulatory Affairs. F. 537. Willard wanted Garnick to determine the views of the scientific experts about the potential for Nu Mark's products to ultimately get approved by the FDA. F. 538.

b. May 2018

Soon after undertaking his assessment of Nu Mark's products, Quigley experienced a "Eureka" moment precipitated by the findings of Altria's scientists: Nu Mark's products lacked the nicotine salts[13] they needed to deliver nicotine satisfaction, as detailed in section III.J.4. of the Facts and summarized below.

Quigley began working to understand Nu Mark's challenges by meeting with the existing Nu Mark leadership team to get their perspective on the business' challenges. F. 535. Based on those meetings, Quigley determined that Nu Mark "did not yet fully understand what was wrong with the business." F. 535. Quigley also met with Altria's scientists, whose insights made clear that Nu Mark's products were lacking what they needed to be competitive. F. 470, 474-475. At that time, Dr. Gerd Kobal, head of Altria's "sensomics" group, was conducting an analysis of nicotine salts and their effect on nicotine absorption and satisfaction. F. 439, 471-472.

Dr. Kobal's analysis demonstrated that nicotine salts, by lowering a product's pH, prevent nicotine from escaping into the mouth and throat before it can reach the deep lung where nicotine is absorbed most effectively. F. 432-433, 439-440. With that newfound knowledge,

[13] The addition of organic acids to a nicotine solution produces nicotine salts. F. 431. The addition of nicotine salts brings down the pH (a measure of acidity) of the nicotine in the e-liquid. F. 432. The pH measure serves as a proxy for how nicotine is delivered to the lungs because the more acid one adds, the lower the pH of the liquid, and the more nicotine salts are created. F. 432. By introducing an acid to nicotine to make nicotine salts, the pH level starts to approach the level of a combustible cigarette. F. 432. Nicotine salts are intended to mimic the nicotine that comes from heating and burning leaf tobacco by delivering nicotine deeper into the lungs. F. 433.

Altria's scientists reached a consensus that nicotine salts are, as they contemporaneously described it, "required for a satisfying and relaxing E-vapor experience," akin to the experience of smoking a cigarette, and that "all newly developed e-vapor products, regardless of nicotine content, should utilize nicotine salt technology." F. 441, 444.

Dr. Kobal's analysis also showed that JUUL possessed the ideal formulation of nicotine salts, allowing it to mimic the nicotine delivery of a cigarette. F. 473. Nu Mark's products did not – most of its products, including Elite, had no nicotine salts at all – and their high pH caused a "significant amount of nicotine loss." F. 445, 448, 458. MarkTen Bold, a cig-a-like and Nu Mark's only product with any salts, had only 1 percent acid, while JUUL had 4 percent. F. 458, 461. Altria found that, as a result of not having the right formulation of nicotine salts, only half of MarkTen Bold's nicotine reached the lung. F. 463. As explained by Richard Jupe, Vice President of Product Development at Altria, Dr. Kobal's research demonstrated that "the products that were in the [Nu Mark] portfolio, the products that were being worked on, [and] the products that were on the shelf were inadequate to achieve th[e] goal of converting smokers." F. 472.

In early June 2018, Dr. Kobal presented Quigley with his key findings, which Quigley and Jupe described as a "Eureka" moment. F. 438, 475. Quigley understood that Dr. Kobal and his team had alerted him to something "foundational" and had identified the root of the "problem with all of [Nu Mark's e-vapor] products." F. 477. At the same time, Quigley understood that despite the significance of these insights, there was no easy fix. As an initial matter, under the Deeming Rule's August 8, 2016 cut-off date, Altria believed it could not add nicotine salts to Elite and put the changed product on the market without first filing a PMTA and obtaining FDA approval, an expensive, time-consuming process that would take years. F. 482. Moreover, identifying the significance of nicotine salts was only the first step toward addressing the issue from a technical perspective. Altria still needed to determine what type of acid or acids was optimal and the right ratio of those acids in combination with the right ratio of the nicotine. F. 478. The scientists also needed to account for the acids' effect on the flavor system and to ensure that any contemplated salts formula would not degrade product components. F. 480. In light of Altria's critical gaps in this area, Quigley wrote to Dr. Kobal and Jupe that it was "important [to] right size expectations for the current products." F. 554.

c. June 2018

In June 2018, following Willard's reorganization of Altria, the new leadership held a series of meetings. Leadership concluded, based on the findings of Altria's scientists, that Nu Mark's products were fundamentally flawed and that the business was in dire need of change. On June 18, 2018, Quigley held a daylong strategy session with his team. F. 543-544. Quigley outlined a new strategy for Nu Mark, based on what he learned from his discussions with the scientists: build a portfolio centered on providing immediate nicotine satisfaction. F. 545-547. Quigley "wanted to make . . . clear to everybody" that "at the end of the day, if you didn't have the immediate nicotine satisfaction, you would not be successful." F. 546.

Three days later, on June 21 and 22, 2018, the most senior leaders from across Altria convened to conduct a broader organizational review known as a Level Setting Meeting. F. 548. The presentations made by Quigley, Jupe, and Murillo at the Level Setting Meeting identified the weakness of both Altria's innovative process and product pipeline. F. 552-554, 556, 558-560. Quigley's presentation explained to senior leadership what Dr. Kobal had explained to him – that is, the scientists' determination that nicotine salts are required to provide nicotine satisfaction to adult tobacco consumers. F. 552-553. Drawing on his previous experience in the diaper industry, Quigley compared an e-vapor product that fails to deliver nicotine satisfaction to a diaper that leaks. "You could add Velcro tabs and you can make them pull up and make them more comfortable." F. 476. As Quigley explained to his colleagues at the Level Setting Meeting, "if your diaper is leaking, no one is going to come back and buy your diaper." F. 476. At the Level Setting Meeting, Quigley also highlighted the various challenges facing Nu Mark and what changes needed to be made. F. 552-557. Quigley's presentation addressed Nu Mark's "overarching gaps," driven by a lack of "clear understanding of how best to deliver nicotine satisfaction." F. 552. Quigley explained that Nu Mark needed to "ground all efforts in nicotine satisfaction first." F. 553. Quigley also conveyed that Altria was not "structured appropriately" to innovate and needed to "think more like a technology company" and develop "different capabilities and different processes." F. 556.

Jupe's presentation at the Level Setting Meeting also highlighted a number of challenges facing Nu Mark's existing products, including that: Elite would not be able to compete without

"higher level nicotine offerings"; MarkTen Bold would not be able to convert adult smokers without a reformulated e-liquid capable of delivering nicotine satisfaction; and MarkTen cig-a-like's PMTA was a nonstarter without a new battery to prevent dry puffing. F. 558.

The presentation at the Level Setting Meeting by Murillo, Altria's Senior Vice President of Regulatory Affairs, covered Nu Mark's challenges from a regulatory perspective. Murillo's presentation conveyed that Altria needed to "embrace what it means to be regulated and be realistic about the FDA's approach"; and that Altria needed to "completely re-set [Nu Mark's] product and filing plans." F. 559-560. As Murillo explained at trial, Altria employees needed to stop "running around like chickens with [their] heads cut off trying to find products in the vapor space that could be successful" and instead return to "first principles" and recognize that the company could not "just . . . throw products against the wall and see which ones stick and fix them later." F. 560.

Murillo described the discussion at the Level Setting Meeting as "sobering," and recalled that "some people were dismayed." F. 562. Quigley recalled that, following the presentations, Willard "stood up and just said, this is a lot of information to process." F. 562. Willard recalled that the information provided "represented a fairly dire view of the likelihood of many of [Altria's] products getting FDA approval." F. 562.

d. July 2018

As part of the internal assessment of Nu Mark's products, in the summer of 2018, Garnick, head of the Regulatory Affairs Group, was also meeting regularly with Altria's regulatory scientists to gain a better understanding of the prospects for regulatory approval of Nu Mark's portfolio of products. F. 539-541. Garnick discovered that there was no one "on the science team" who believed that any of Altria's products could receive FDA approval. F. 541. As a result of his meetings with the scientists in the summer of 2018, Garnick "developed a view that Altria should pull its e-vapor products from the market." F. 542 (explaining that "it would cost a lot of money to create a new version [of each product] that would get a PMTA. And for every product, then, we would have to file two PMTAs, one to keep the current product on the market and one to introduce a new product." Furthermore, "[n]one of the products on the market were effective in converting smokers.").

On July 12, 2018, shortly after the June Level Setting Meeting, Garnick began working with his regulatory team to put together a presentation for the August Board meeting that would bring these problems to the Directors' attention. F. 568-569. The slide presentation, the first draft of which was completed on July 15, 2018, set forth the substantive information provided by Altria's scientists and regulatory experts. F. 570 ("July 15 Draft Board Presentation"). This presentation for the Board meeting to be held in August of 2018 identified "key concerns" with each of Nu Mark's products and concluded that each product failed to meet the requirements for obtaining regulatory approval. F. 572 (MarkTen cig-a-like); F. 573 (Elite); F. 574 (Apex). For instance, as to Elite, the July 15 Draft Board Presentation conveyed that the product could not satisfy three of the four criteria necessary to obtain PMTA approval: manufacturing, risk reduction, and adult smoker conversion. F. 573. Elite's prospects as to the fourth criterion, no unintended consequences, were identified as uncertain because of the FDA's concerns regarding underage use of pod devices. F. 573. Elite overall had "three strikes and a question mark," which reflected Murillo's view that Elite "had very, very low prospects of success for a PMTA as it stood." F. 573. As to the MarkTen cig-a-like, the July 15 Draft Board Presentation conveyed that the product could not satisfy two of the four criteria necessary to obtain PMTA approval: risk reduction and adult smoker conversion. F. 572.

e. August 2018

Quigley convened a meeting with Altria's senior management, which was held on August 3, 2018, to update leadership on Nu Mark's current year performance ("August 3 Meeting"). F. 575. He explained that Nu Mark's portfolio "lacked quality pod products" and "products that provide immediate nicotine satisfaction." F. 576. Quigley also conveyed that Elite "did not have the . . . levels of nicotine that adult smokers would be looking for." F. 580. As a result, Quigley advised the group that Nu Mark was "limited to competing . . . in the cig-a-like segment," which was "very small" and "not meaningful in terms of what was driving change in the tobacco landscape." F. 578. Willard recalled that at the August 3 Meeting, Quigley explained that the only e-vapor products that Nu Mark had at that point in time that were at all competitive were MarkTen cig-a-likes, "and while that might seem like a bright spot, [Altria] saw that the cigalike

category was plummeting in share, and so if that was a bright spot, it was a very dim bright spot." F. 579.

To redirect Nu Mark going forward, Quigley proposed what he termed his "bridge plan." F. 584. Under Quigley's bridge plan, Nu Mark would continue to lose money for the foreseeable future with its in-market products, with the hope of "achiev[ing] leadership" with newly developed, FDA-approved products some seven years later, or, as noted in his presentation, by 2025. F. 584. Quigley understood that he was proposing a "risky approach" and that his plan was a "long shot." F. 585. Willard recalled that Quigley conveyed that "in the short run," Nu Mark could not "do much better" than it was doing at that time, and that a plan that looked to 2025 was the "best [he could] do." F. 586.

After Quigley's presentation at the August 3 Meeting, Gifford asked whether Altria should consider pulling Elite from the market. F. 587. Gifford observed at the time that Altria was losing money and the products did not have the nicotine they needed and questioned why Altria was continuing to lose money on this business. F. 587. Gifford testified that, given the state of Nu Mark's business and its portfolio, he believed Altria "really needed to assess whether [it] needed to free up those people and financial resources and invest them elsewhere." F. 587. Gifford's questions made sense to Quigley in light of "the fundamental business gaps" Quigley had highlighted. F. 588.

A few weeks later, on August 23, 2018, Garnick presented to Altria's Board the assessment of Nu Mark's regulatory prospects that the Regulatory Affairs team had begun preparing in early July 2018 in conjunction with Altria's scientists ("August 23 Board Meeting"). F. 590. The presentation at the August 23 Board Meeting conveyed that the Mark Ten cig-a-like could not satisfy two of the four criteria necessary to obtain PMTA approval: meaningful risk reduction and adult smoker conversion, and the Mark Ten Elite could not satisfy three of the four criteria necessary to obtain PMTA approval: manufacturing, risk reduction, and adult smoker conversion. F. 593-594.

Garnick spoke with Willard in advance of the August 23, 2018 Board Meeting about how "the Board needed to know the facts about what [Garnick] had found in his regulatory review."

F. 595. Both Garnick and Willard anticipated "that some of the Board [might] be unhappy that we hadn't had a better outcome," but believed that the Board needed to be apprised of the scientists' assessment of Nu Mark's regulatory prospects. F. 595.

3. Late July 2018 – August 2018 Negotiations between JLI and Altria

As detailed in sections III.L.5. and L.6. of the Facts, and summarized below, during August 2018, Altria and JLI restarted discussions of a possible investment, beginning with a proposed term sheet, but discussions reached an impasse at the end of the month over issues related to valuation, payment terms, and corporate control. Before addressing these negotiations in more detail, a few background facts are necessary.

The primary negotiators for Altria were senior executives Howard Willard, Billy Gifford, Murray Garnick, and K.C. Crosthwaite. F. 704. During the time of the negotiations: Willard was Altria's Chief Operating Officer ("COO"), and, as of May 2018, Altria's Chairman and CEO; Gifford was Altria's Chief Financial Officer ("CFO"), and as of May 2018, Altria's Vice Chairman; Garnick was Executive Vice President and General Counsel of Altria and also the leader of Altria's Regulatory Affairs division (since July 2017) and Regulatory Sciences division (since June 2018); and Crosthwaite was Altria's Chief Growth Officer, as of June 2018, after being President and CEO of Altria subsidiary Philip Morris USA. F. 705-708.

The primary negotiators for JLI were Nicholas Pritzker, Riaz Valani, and Kevin Burns. F. 715. Pritzker is an investor in JLI through his family investment entities and a member of its Board of Directors. F. 716. Valani is one of the original investors in the company that is now JLI, through Valani's venture capital business, Global Asset Capital, and is also on JLI's Board. F. 717. At the time of the negotiations, Burns was CEO of JLI. F. 717.

JLI's lead negotiators most frequently interacted with Willard, Gifford, and Garnick, with Willard and Gifford being the primary points of contact. F. 709. Altria Board member Dinyar Devitre was a trusted acquaintance of Valani, who acted principally as a facilitator for negotiations. F. 710.

a. July 30, 2018 Term Sheet

By July 2018, Altria realized that JLI was unlikely to agree to a deal with Altria that allowed a pathway for Altria to gain control of JLI. F. 760. Therefore, Altria was prepared to accept a minority investment in JLI and was contemplating a $13 billion investment for a 49.9 percent stake in JLI's U.S. business. F. 755.

On July 30, 2018, JLI sent a term sheet to Altria summarizing terms for a potential transaction ("July 30 Term Sheet"). F. 761. This term sheet, the first term sheet exchanged between JLI and Altria, contemplated that Altria would purchase 45 percent of JLI's U.S. business in exchange for five percent of the voting power. F.762-763. Altria would obtain voting power via converting its initial non-voting stock, "upon receipt of Antitrust Clearance." F. 763. Altria's Gifford found the ownership and control terms in JLI's July 30 Term Sheet "appalling," explaining that "you give all of this money to get an economic interest and you really only have 5 percent of the say." F. 764.

The July 30 Term Sheet included two provisions that addressed how Altria's e-vapor product portfolio would be handled after the contemplated transaction took place. F. 765. The first of these provisions proposed steps for obtaining HSR clearance (or "antitrust clearance") for the transaction from the FTC. F. 765. The second of these provisions proposed a non-compete provision for Altria, with an exception carved out for MarkTen cig-a-likes and MarkTen Elite during the period of antitrust review and clearance. F. 765.

i. Antitrust Clearance Matters

The July 30 Term Sheet addressed the treatment of Altria's e-vapor products in connection with regulatory approval for the contemplated transaction in a section devoted to "Antitrust Clearance Matters." F. 766. This section outlined that any contemplated transaction would require both parties to use "reasonable best efforts to seek Antitrust Clearance for a period of at least nine months after the Purchase" and to "cooperate with the FTC and agree to the reasonable concessionary requirements of the FTC in connection with changes in [Altria's] non-combustible reduced-risk products business." F. 771. The section further stated:

> Promptly and in no event later than nine months following the Purchase, subject to the license [granted to JLI for Altria's non-trademark intellectual property in e-vapor], [Altria] will divest (or if divestiture is not reasonably practicable, contribute at no cost to [JLI] and if such a contribution is not reasonably practicable, then cease to operate), all [Altria] assets relating to the Field[14] in the U.S., including all electronic nicotine delivery systems and products it acquired, developed, or has under development.

F. 766.

JLI believed that how the contemplated transaction addressed Altria's existing products would be scrutinized by the FTC and expected that the treatment of Altria's e-vapor products post-transaction was a process that "would be overseen by the FTC." F. 770, 778. As Pritzker explained, it was expected that the FTC "would likely require a divestiture" of Altria's existing products. F. 770; *see also* F. 742 (Pritzker's "assumption [was that] the FTC would most likely require divestiture" of any competitive products of Altria's.). It was important for JLI to obtain assurances from Altria that "at the end of the FTC process, if the FTC required anything of Altria, even something that was concessionary in nature, like a potential divesting of products, that [Altria] would agree to those things" and that Altria would not be able to "walk away from the deal because of concessionary requirements." F. 772. JLI "needed to make sure that Altria would, in fact, be willing to sell those products in the marketplace for whatever they could get for those products at the requirement of the FTC or anything else the FTC would require, for that matter." F. 772. The divestiture/contribution/"cease to operate" provision was not intended to describe something Altria would do, or was required to do, prior to entering into any transaction with JLI. F. 773.

JLI's Valani further explained, with regard to the divest/contribute/"cease to operate" language, "it was important to JLI that if . . . [Altria] were to be a material equity holder" in JLI, that Altria not also sell products of its own to compete with JLI because, if the transaction went forward, Altria "would be privy to a lot of detailed commercial product and technology information that . . . could prejudice JLI." F. 769.

[14] For purposes of the parties' negotiations, the "Field" was defined as "vapor-based electronic nicotine delivery systems." F. 766 n.42.

ii. Altria Support Obligations/Non-compete Provision

The July 30 Term Sheet contained a proposed non-compete provision in a section outlining Altria's "Support Obligations." This section detailed various support services that JLI proposed Altria would provide to JLI, such as regulatory assistance with JLI's PMTAs. F. 774. Under the non-compete proposal, Altria would agree, "for so long as it owns at least 5% of [JLI's] outstanding shares, to refrain from competing anywhere in the world in the e-vapor business (other than with respect to MarkTen and MarkTen Elite prior to their divestiture or contribution as described above)." F. 775. The exception carved out from the non-compete provision for MarkTen and Elite is at times referred to as the "carve-out."

JLI proposed the non-compete provision because, in providing the contemplated support services to JLI, Altria would be privy to JLI's technology, trade secrets, data, and other business information that would work to the detriment of JUUL if Altria were to apply that information to Altria's own product portfolio. F. 776. Because the potential transaction contemplated Altria's having access to JLI's proprietary information or data, it would be "unacceptable" to JLI for Altria to be in a position to use such information to compete against JLI. F. 770.

JLI was not "worried about competition from MarkTen or MarkTen Elite as [the products] were at that time," but was "concerned about changes" that Altria might make to improve those products, using JLI's information. F. 781. As Pritzker explained, JLI feared that Altria would "use information [it was] getting from [JLI] to be able to enhance [its] product or develop new products that would be injurious to [JLI's] business." F. 780. JLI's concern was "how Altria might use information that it would obtain from JUUL after the transaction in order to use JUUL's data and trade secrets against JUUL." F. 781. The goal of having a carve-out in the non-compete provision for MarkTen and Elite prior to their divestiture or contribution was to keep those products on the market until the FTC could review the transaction and determine how those products would be handled. F. 777-779.

JLI and Altria negotiators met on August 1, 2018 to discuss some of the most important terms and assess whether there was enough common ground to move forward with negotiations for a transaction ("August 1 Meeting"). F. 782-783. According to participants in that meeting, the focus was on the issues of ownership and control. F. 784-788. Altria was particularly

displeased by JLI's proposal in the July 30 Term Sheet to provide five percent voting power for a 45 percent economic interest. F. 786. This was a "huge sticking point," according to Gifford. F. 785. As Pritzker described it, Altria's "goal was to acquire [JLI] completely at some point" and at the August 1 Meeting, JLI made "clear that that was not going to be possible." F. 786.

The record does not indicate that JLI and Altria discussed the divestiture/contribution/ "cease to operate" provision or the non-compete provision at the August 1 Meeting. *See* F. 787-788. The provision also appeared in a term sheet sent by JLI to Altria on August 4, 2018. F. 789, 792. That term sheet was intended to try to address Altria's concerns regarding control, with JLI offering to increase Altria's voting power to 15 percent and to allow Altria a non-voting observer to JLI's Board prior to HSR clearance. F. 790-791.

b. August 9, 2018 Term Sheet

On August 9, 2018, Altria sent JLI Altria's first proposed term sheet ("August 9 Term Sheet"), which was a mark-up of the term sheet JLI had provided on August 4, 2018. F. 808. Altria maintained the proposal to purchase a 45 percent stake in JLI's U.S. business, but increased Altria's proposed voting power from 15 percent to 35 percent. F. 791, 809.

Altria's August 9 Term Sheet retained JLI's language that both parties would use "reasonable best efforts to seek Antitrust Clearance" and "cooperate with the FTC and agree to the reasonable concessionary requirements of the FTC" in connection with changes in Altria's e-vapor business. F. 810. However, Altria struck the entire divestiture/contribution/"cease to operate" provision that had been in the July 30 and August 4 Term Sheets. F. 810. In its place, Altria proposed to exclusively license its e-vapor assets to JLI, upon HSR approval. F. 811. With respect to the non-compete provision, Altria proposed to expand the carve-out beyond existing products to also encompass products under development, prior to the contemplated licensing to JLI. F. 812.

On August 15, 2018, Altria's Devitre, who had been meeting with JLI's Valani, transmitted to Willard and Gifford a two-page bulleted list of JLI's issues to be discussed at a planned meeting of the parties in San Francisco, California on August 18. F. 814. The list covered eight topics, mostly related to control and governance. F. 816. For example, JLI

identified as "unacceptable" Altria's proposed right of first refusal on additional stock issuances by JLI, Altria's proposal for 35 percent discretionary voting right and up to 45 percent voting power, Altria's proposed composition of seats on JLI's Board of Directors, and Altria's proposed valuation calculation. F. 816.

JLI's list of issues also identified as "not acceptable" Altria's revisions to the antitrust clearance provisions and the non-compete provision. F. 817. JLI objected to Altria's proposal to expand the carve-out from the non-compete provision, beyond existing products to also encompass products under development, prior to the contemplated licensing to JLI. F. 817. JLI also objected to Altria's having stricken "the commitment to divest MarkTen." F. 817. Notably, JLI's list of issues did not include any objection or other mention of Altria's having stricken the "cease to operate" language from the July 30 and August 4 Term Sheets. F. 818.

Explaining its objections to Altria's revisions to the antitrust clearance provisions and the non-compete provision, JLI wrote: "We understood that you (and your successors and current and future affiliates) would not compete against us in vapor in the US and that JUUL would be the vehicle for all vapor assets." F. 817. Valani explained that JLI "did not feel like it was appropriate, natural, normal under any circumstances for a party that had access to all of our proprietary information to be . . . competing in markets, particularly in situations where they could use our own information for their own benefit." F. 819.

Altria and JLI, together with their respective outside legal counsel, met on August 18, 2018. F. 820. Notes for opening remarks to be given by Willard at the meeting, prepared for Willard by Altria's outside counsel, explained Altria's revisions to the antitrust clearance provisions and the non-compete provision as driven by antitrust considerations, rather than substantive disagreement with JLI. F. 821. The prepared remarks stated: "Upon receiving antitrust approval, we would contribute MarkTen to [JLI] and become subject to a robust non-compete that makes [JLI] our exclusive e-vapor play. We can't agree to these terms under antitrust laws prior to receiving HSR approval, which was driving our clarifications in the term sheet." F. 821. The record does not demonstrate that Willard delivered these remarks at the meeting.

Willard did not recall the treatment of Altria's e-vapor products being a topic of the discussion among the principals at the August 18, 2018 meeting. F. 825. Altria and JLI discussed voting power and whether the potential investment would be for JLI's domestic business only or would also include JLI's international business. F. 824. Pritzker remained concerned that splitting JLI into domestic and international businesses for purposes of the transaction would "create a mountain of problems for the company in the future." F. 824.

c. August 19, 2018 Term Sheet

By mid-August 2018, Altria and JLI arrived at an understanding with regard to the antitrust clearance and non-compete issues for the potential transaction. As Garnick, Altria's counsel, explained: "there was a recognition that after HSR approval, [Altria] would be on [JLI's] Board and . . . they didn't want us also to be competitors." F. 826. By mid-August 2018, there was a "resolution that [Altria] would remain in the market with our e-vapor products until we obtained HSR approval . . . and then when we obtained HSR approval, [Altria] would contribute our e-vapor products to" JLI. F. 826.

Garnick further explained, "once [Altria] fully understood what [JLI's] position was and the reason for it, we could understand it and we had some agreement, some sympathy for it, and that's why we thought we could live with a carve-out provision [from the non-compete] that allowed us to stay in the market until we got HSR approval and, at that point, we would get board seats, we would have more operational involvement into [JLI], and that would be an appropriate time for us to contribute our e-vapor products to [JLI]." F. 827.

On August 19, 2018, JLI sent proposed revisions to Altria's August 9 Term Sheet ("August 19 Term Sheet"). F. 828. JLI proposed that Altria would purchase a 45 percent stake in JLI's U.S. business and receive 20 percent of the voting power, which was a decrease from the 35 percent Altria had proposed in its August 9 Term Sheet. F. 829.

With respect to the treatment of Altria's existing e-vapor business, JLI proposed that Altria would contribute its e-vapor assets to JLI, at no cost to JLI, upon receiving antitrust clearance of the transaction, but in the event regulatory approval was not obtained within nine months following the transaction, Altria would divest the assets within six months thereafter.

F. 831. The August 19 Term Sheet did not state or contemplate that Altria would cease to operate its existing e-vapor business, either before or after HSR clearance. F. 832. Nothing in the August 19 Term Sheet suggested that Altria would, or was expected to, take any action with regard to its e-vapor products before any transaction with JLI or before the FTC had a chance to review that transaction. F. 833.

Regarding the non-compete provision, JLI struck Altria's attempt to expand the carve-out beyond Altria's existing e-vapor products to include products under development. F. 835. JLI proposed instead that Altria would "refrain . . . from competing (or preparing to compete including through research and development activities) anywhere in the world in the e-vapor business (other than with respect to MarkTen and MarkTen Elite prior to their contribution or divestiture as described above)." F. 835.

Based on JLI's August 19 Term Sheet, Altria concluded that JLI "had no problem with [Altria's] continuing to compete against them with the products we currently had on the market. What they wanted, though, is for that to stop once we got HSR approval and . . . participated on their Board." F. 837.

On August 22, 2018, counsel for Altria and JLI circulated a joint issues list, with each party identifying its positions on the terms of the August 19 Term Sheet. F. 838. The list showed a consensus on the proposed contribution/divestiture procedure, described above. F. 839. With respect to the proposed non-compete provision and the carve-out, the list reflected a consensus that, as provided under the August 19 Term Sheet, MarkTen cig-a-likes and MarkTen Elite would be exempted and could stay on the market until contribution or divestiture in connection with the HSR clearance process. F. 840. In addition, Altria decided to accept JLI's position on the scope of the carve-out, having determined that JLI's concern that Altria could use inside information to compete against JUUL in the future was not unreasonable. F. 841.

d. Late August 2018 Impasse

Notwithstanding the apparent consensus between Altria and JLI on the antitrust clearance and non-compete terms for a potential future transaction, other issues remained to be negotiated.

The parties' principals and outside counsel met to try to resolve outstanding issues on August 27, 2018. F. 846.

Altria's Board did not want Altria to agree to a simultaneous sign-and-close structure, but instead wanted to wait for antitrust approval of the transaction before transferring payment to JLI. F. 843. Under a sign-and-close deal structure, Altria would purchase non-voting shares of JLI that would convert to voting shares upon HSR clearance, as opposed to providing a smaller upfront investment pending antitrust review or purchasing voting shares outright following HSR clearance. F. 844-845. At the August 27 meeting, Altria indicated that it would not agree to a sign-and-close structure, but instead wanted to pay JLI after HSR approval. JLI indicated that this was unacceptable. F. 848. As Valani explained, JLI insisted on the sign-and-close structure because it would be "really difficult" for JLI "to enter into a transaction and then wait nine months or more" to find out if it would receive the full investment. JLI "was going to raise capital from somewhere, and if it wasn't Altria, it would have been financial investors." F. 849. Agreeing to wait until HSR clearance before receiving Altria's investment would "foreclose any other options" and leave JLI "in limbo with a lot of explaining to do, in terms of how this is all supposed to work, [which] felt like a very tenuous position" for JLI to be in. F. 849. JLI did not want to "bear the risk, and that was that." F. 849.

JLI and Altria also remained very far apart on what a reasonable price would be, in part because Altria wanted to exclude the international company from the potential transaction. F. 850. In addition, JLI was concerned that a 45 percent interest was too close to a majority interest and that Altria might devise a way to obtain a controlling position. F. 850.

In summary, the August 27, 2018 meeting did not go well. F. 847. By late August 2018, JLI and Altria were at an impasse, and negotiations broke down. F. 848. On August 28, 2018, the JLI Board concluded that, "in light of the wholly unsatisfactory nature of recent discussions with [Altria]," the negotiations were "highly unlikely to result in an investment by, or strategic relationship with, [Altria]." F. 850. On September 8, 2018, JLI's Strategic Committee, composed of Pritzker and Valani, informed the JLI Board that "[the Committee] was frustrated with the progress that was being made with Altria" and recommended to the Board that discussions with Altria cease. F. 857. The Strategic Committee was concerned about the differences between JLI

and Altria on valuation, the distraction to the company, and the risk that the fact of the existence of the negotiations would leak and potentially harm JLI's reputation. F. 857.

Accepting the recommendation of the Strategic Committee, on September 8, 2018, the Board directed that JLI "cease discussions of an investment or strategic relationship" with Altria. F. 858. The Board noted, among other reasons, that JLI's "prospects for future growth and further increases in valuation (independent of any transaction with Altria), . . . were not adequately reflected in the [Altria] investment offer." F. 858. By September 11, 2018, JLI had decided to pursue different financing than the Altria investment, and Pritzker "wanted to just get that done and move on." F. 861. JLI's Valani notified Altria's Devitre that JLI was focused on a tender offer and not interested in additional discussions with Altria. F. 859-861.

At the end of August and into September 2018, Gifford, Altria's then Vice Chairman, believed that a potential deal with JLI "was off." F. 856. In September 2018, although Altria had some occasional internal discussions about the possibility of restarting negotiations with JLI, there were no substantive negotiations between Altria and JLI during this period, no terms sheets exchanged, and no meetings held between JLI and Altria. F. 854-855. Because of the impasse, negotiations remained stagnant through September and into October of 2018, and there were no further substantive negotiations until Willard sent a letter to JLI on October 5, 2018. F. 865.

4. September 2018

Each September, Altria customarily begins putting together its plans for the upcoming year, and did so in September 2018. F. 598. By this time, having received the results of the detailed assessments of Nu Mark's e-vapor products, summarized in section II.C.2. above, Altria had concluded that "many of the existing Nu Mark products – actually, all of the existing Nu Mark products" – had failed to be successful in the marketplace and that a "different approach" was needed. F. 599. Moreover, as summarized in section II.C.3.d. above, negotiations with JLI broke down at the end of August 2018 and JLI had advised Altria that it was pursuing another investment opportunity. Against this backdrop, Altria made a number of decisions in September 2018, including the decision to discontinue Elite, as summarized below.

a. Decision to Establish Growth Teams

In September 2018, Altria decided to establish what Altria called "Growth Teams." F. 600. The Growth Teams would be the culmination of the 100-day review of Nu Mark's e-vapor portfolio that had started in May 2018. F. 634.

The Growth Teams were designed to be small teams of individuals that would "start from scratch" and be empowered to move quickly to try to develop new "satisfying, innovative products." F. 601, 634. The goal was to develop new products that had the potential to "leapfrog the JUUL product," which was at the time the superior product in the marketplace. F. 602. "Leapfrog products" are traditionally viewed as products that are not just "a little bit better" than the products that are out in the marketplace, but are "so much better that they become a break-through leader" when introduced on the market. F. 602. Altria understood that any new product that the Growth Teams might develop was many years away from being in the market, including because of the time required to complete the PMTA and go through the FDA approval process. F. 603.

The decision to transition to Growth Teams showed that Altria had little to no confidence in Nu Mark's then-existing e-vapor portfolio. F. 599-600. As Willard explained:

> [U]ltimately, we decided that, really, none of the MarkTen products had a reasonable likelihood of future success as measured by adult smoker conversion or profitability or, frankly, even being able to stay on the market, and we decided to take a different approach, which was . . . [to] take everything we had learned, start over again with what we called growth teams, and acknowledge that it was probably going to be . . . five or six years before the products that were designed by those teams . . . could go on the market . . . . And so we decided that the growth teams [were] a long shot, it was going to be slow, but that was the best path forward.

F. 600.

Putting the Growth Teams plan into place was a substantial undertaking that would require identifying the best internal personnel to staff the teams and finding replacements for those employees in their prior roles at Altria. F. 604. In order to fund and focus on the Growth Teams, Altria "would have to stop other work." F. 606. On September 10, 2018, Altria's regulatory team took an inventory of ongoing projects for the purpose of transitioning to Growth

Teams. F. 607. Quigley undertook a similar effort to determine what Nu Mark work needed to continue and what work would stop, which the Growth Teams would "then pick up going forward on vapor product development." F. 607. In response to a September 14, 2018 email inquiry from Garnick as to whether Altria should stop work on the PMTA for Elite as part of the transition to Growth Teams, Quigley replied, "We should stop ALL work around the [Elite] pmta." F. 608-609. On September 17, 2018, Willard approved a plan to establish the Growth Teams and discontinue all work on Elite. F. 610.

According to Garnick, Altria would not have "pulled the trigger" on transitioning to Growth Teams "if [Altria] thought that the JUUL deal was going to go ahead." F. 610.

b. September 12, 2018 Letter from the FDA

As set forth above, Altria's decision to stop work on Elite and transition to developing a leapfrog product through the establishment of Growth Teams was the result of a detailed internal assessment of Elite's weakness in terms of nicotine satisfaction and potential for regulatory approval. On September 12, 2018, Altria received a letter from the FDA (the "September 12 Letter" or "FDA Letter") that triggered a set of additional considerations for Altria in assessing the future of Elite.

After making several public warnings in the spring of 2018 about youth vaping (*see* F. 271-274), on September 12, 2018, the FDA sent a letter to Altria, along with four other e-vapor manufacturers including JLI, and made a simultaneous public statement demanding that the manufacturers take "bold action" to address the youth vaping crisis. F. 275. In its letter to Altria, the FDA noted that an earlier enforcement "blitz" of retailers revealed "the illegal sale of MarkTen products to minors." F. 280. The FDA advised Altria that it was reconsidering its exercise of enforcement discretion in connection with the Deeming Rule, *i.e.*, the FDA was raising the possibility that all e-vapor products, including those on the market before August 8, 2016, would need to be removed unless and until they received PMTA authorization. F. 281. The FDA letter asked Altria to meet with the Commissioner of the FDA and to respond in writing to the letter within 60 days with "a detailed plan . . . to address and mitigate widespread use by minors." F. 282. Among other potential actions, the FDA listed "removing flavored products from the market until those products can be reviewed by the FDA" as something Altria could

consider as part of its plan. F. 282. In an accompanying public statement, the FDA Commissioner called for manufacturers "to respond with forceful plans . . . or face regulatory consequences," and reiterated that the FDA might utilize its "civil and criminal enforcement tools." F. 278-279.

Altria viewed the FDA Letter and public statement as cause for concern. As Willard explained, the September 12 Letter was "from [Altria's] most important regulator," and the message conveyed was "you're part of the problem, and I expect you to contribute to fixing it. I expect you to do it quickly and completely." F. 283-284. To Willard, the FDA's statements were "pretty threatening." F. 284. Murillo viewed the FDA announcement that it was reevaluating its compliance policy regarding closed system products as very important and believed that the letter "cast a pall over the vapor category." F. 285.

c. Decision to Discontinue Elite and Non-traditional E-cigarette Flavors

Shortly after receiving the FDA's September 12 Letter, Altria's senior leadership began to discuss the possibility of pulling Elite from the market. F. 611. As Garnick explained, Elite and the non-traditional flavored MarkTen cig-a-like products already were not "converting smokers, they were losing money, and they wouldn't get a PMTA." The FDA's September 12 Letter provided Altria with another reason to discontinue these products. F. 611.

From September 25 to 27, 2018, Altria's leadership team gathered for Altria's annual planning meeting at its off-site facility in Montana, known as the Ranch ("September Ranch Meeting"). F. 613. By the time of the September Ranch Meeting, there was agreement among Altria's and Nu Mark's leaders that pulling pod products and non-traditional flavors from the market were ways that the company should and would respond to the FDA's concerns. F. 614. As summarized in a slide presented by Quigley at the September Ranch Meeting, Altria's leadership had decided "in response to FDA," that Altria would "remove Elite & Apex from the Marketplace;"[15] and remove non-traditional flavored cig-a-like products (defined as all flavors

[15] During the September Ranch Meeting, Altria concluded that Apex, another pod product, was even less promising than Elite. F. 615. Apex's "large," "baton" like shape was seen as too "clunky." F. 616. Nu Mark "never really built out a [PMTA] plan for Apex." F. 618.

other than tobacco, menthol, or mint). F. 620-621. Willard agreed with this decision, although he was also driven by concern about whether Altria's pod products could demonstrate the necessary criteria to obtain PMTA approval, including conversion potential. F. 623. Murillo thought that removing pods and non-traditional flavors was the right decision in response to the FDA, explaining that he "thought it was really important to take [the FDA's] concern very, very seriously." F. 622.

At the September Ranch Meeting, Altria leadership continued to talk about how to move forward with the Growth Teams. Quigley explained in his presentation that Nu Mark lacked the "internal development capabilities and processes required to lead in innovative products," including the "nicotine science and insights . . . to develop a product that [could] win and effectively switch smokers." F. 624. Quigley further explained that the company needed to "implement a different structure and operating model," *i.e.*, the Growth Teams. F. 624.

At the September Ranch Meeting, Quigley also proposed downsizing Nu Mark. F. 625. As Gifford explained, if Altria was going to continue investing in Nu Mark, including by funding the Growth Teams, Altria needed to determine a way to "free up some financial resources and people resources." F. 625.

5. October 2018

Beginning in October 2018, Altria's strategy for its e-vapor business, post-Elite, consisted of two simultaneous paths: internal growth teams that would work to try to develop a leapfrog product and growth by acquisition of an interest in JLI. F. 866.

In an October 5, 2018 call, Altria leadership advised the Board of the decision made at the September Ranch Meeting. F. 630. According to October 4, 2018 notes prepared by Garnick for the call, Altria leadership told the Board that Altria would tell the FDA Commissioner, at a scheduled October 18, 2018 meeting, that Altria was "seriously considering unliterally [sic] taking off Mark Ten Elite from the market" and that Altria would be unilaterally "removing from the market all flavor e-vapor products other than tobacco, menthol, and mint." F. 630. Leadership explained to the Board that Altria "did not have an evapor product that was a Juul fighter or free of regulatory problems" and told the Board that Altria should take this "bold step"

of discontinuing these products "regardless of" the possibility of a future deal with JLI. F. 630. Also on October 5, 2018, Willard sent a letter to JLI, which Altria saw as "one last effort" to re-engage JLI, based on a different deal structure, summarized below ("October 5 Letter"). F. 868. According to the October 4, 2018 notes referenced above, Altria leadership advised the Board that it was "not terribly optimistic" about reaching out to JLI, "but [thought it was] worth a final try." Garnick expected that JLI would not re-engage, and Altria was "fully prepared for that." F. 869.

a. Announcement of the Growth Teams

On October 5, 2018, Altria officially announced the launch of the Growth Teams. F. 632. Willard circulated a company-wide memo, explaining that Altria had "spent the past 100 days doing a deep situation analysis" of Nu Mark's business and determined that a "change in direction [was] necessary." F. 633. The Growth Teams, which were to be housed outside Nu Mark, would take over innovative product development work. F. 635. Originally, Quigley proposed that Nu Mark run the Growth Teams, but Altria decided instead to staff the teams with "different people who [had] a fresh perspective." F. 634. Roughly 60 Nu Mark employees would be terminated or transferred as part of the Growth Teams strategy. F. 636.

Recruiting outside talent with innovation experience had been challenging for Altria for a number of years. F. 642. To help lead the Growth Teams, in October 2018, Altria hired Bassiouni Khalid as Senior Vice President of Innovative Product Development. F. 641. However, Khalid was terminated when, within a few days of hiring Khalid, Altria learned that Khalid had falsified his resume and references. F. 643. Hiring a replacement person with the correct expertise, who was willing to move to Altria's headquarters in Richmond, Virginia, proved difficult. F. 645. Altria placed its Vice President of Product Development, Richard Jupe, in charge of the Growth Teams. F. 644. Jupe's background is not in developing innovative products or electronic-based products; he is a physicist whose primary experience is in the design and manufacturing of combustible cigarettes. F. 644.

After the October 5, 2018 announcement of the Growth Teams, the Growth Teams began to work and had "free rein" to determine the direction of e-vapor product development, unconstrained by budget. F. 637-638. However, Altria "didn't even have a product concept in

mind," for the leapfrog product Altria hoped to develop. F. 639. "The idea was to bring some of our best scientists together . . . and come up with a product concept." F. 639 ("It was a bunch of people in a room saying, okay, think of something.").

b. Resumption of Talks between Altria and JLI

The alternative deal structure that Altria offered in its October 5 Letter to JLI reflected a number of concessions to JLI. Altria proposed to acquire a 35% economic and voting interest in the entirety of JLI. F. 870. Previously, Altria had proposed acquiring a 45% interest of only JLI's U.S. business. F. 870. Altria's offer of an investment that would encompass JLI's entire company, rather than only JLI's U.S. business, caused JLI to be more optimistic that Altria and JLI could reach an agreement on value. F. 872. The October 5 Letter also proposed that Altria would make the full investment at closing, as JLI had wanted, at which time Altria would receive non-voting shares, with the parties cooperating to seek regulatory approval to convert those shares into voting shares. F. 870. Furthermore, Altria would agree to a standstill to prevent Altria from acquiring additional shares or control of JLI following the investment, which addressed JLI's concerns about Altria gaining control of JLI. F. 870, 875. In short, the October 5 Letter proposed terms related to deal structure and control that were "particularly important to JLI" and that were "significantly different than the last deal" Altria and JLI had been discussing. F. 873. After receiving the October 5 Letter, "for the first time in the entire time that [JLI and Altria had] been talking," Pritzker believed that the parties "had the outline of a transaction that might be possible." F. 879.

The October 5 Letter did not reflect any changes in Altria's or JLI's positions with respect to the non-compete provision the parties had previously discussed. In the October 5 Letter, Altria proposed to agree that, after the contemplated transaction, Altria "and its current and future subsidiaries will not compete, in a manner consistent with [the parties'] previous discussions, in the U.S. e-vapor market" during the period that Altria would be providing support services to JLI, which was a proposed initial six-year period, with successive three-year extensions by mutual agreement. F. 876-877. JLI understood Willard's reference in the October 5 Letter to "our previous discussions" concerning the proposed non-compete provision to mean "consistent with [the] prior draft of the term sheets," the most recent of which was the August 19 Term Sheet sent by JLI. F. 878. The non-compete provision proposed in that term sheet

contemplated that MarkTen cig-a-likes and Elite would remain on the market, exempt from the non-compete terms, until the assets were divested or contributed in connection with the antitrust review process. F. 835.

On October 12, 2018, Pritzker informed Altria's Willard that JLI was amenable to the terms proposed in the October 5 Letter. F. 881. On October 15, 2018, Altria sent JLI a revised version of the August 19 Term Sheet, reflecting the terms Altria proposed in the October 5 Letter ("October 15 Term Sheet"). F. 883. Regarding treatment of Altria's existing products, the Antitrust Clearance Matters section of the October 15 Term Sheet proposed that Altria would contribute its e-vapor products to JLI "upon receipt of antitrust clearance," or "if necessary to obtain Antitrust Clearance," Altria would divest them. F. 885.

The non-compete provision proposed in the October 15 Term Sheet provided, consistent with the August 19 Term Sheet, that Altria would not compete with JLI, including by developing new e-vapor products, but that Altria could continue with its then-existing e-vapor business until the contemplated transaction cleared HSR review. F. 891. Altria also revised the non-compete provision to propose that the provision would "terminate upon the termination of the" time period in which Altria would be providing support services to JLI. F. 892.

c. FDA Meeting and Announcement of Withdrawal of Products

On October 18, 2018, Altria met with the then-Commissioner of the FDA, Dr. Scott Gottlieb, to discuss the FDA's September 12 Letter and Altria's planned response. F. 646. At the meeting, Altria informed the FDA of its intention to withdraw both its pod products and its non-traditional cig-a-like flavors from the market. F. 646.

On October 25, 2018, Altria sent its formal response to the FDA's September 12 Letter, in a letter that the company made public that same day ("October 25 Letter"). F. 648. Altria also announced that it would withdraw all of its pod products from the market and discontinue all non-traditional cig-a-like flavors. F. 649-650. Altria stated that although it did not believe it had a "current issue with youth access to or use of [its] pod-based products," it did "not want to risk contributing to the issue" with a product that was not converting adult smokers. F. 649.

After sending it to the FDA, Altria publicly released the October 25 Letter to the FDA "as part of a collection of information related to [its third quarter] earnings call." F. 651. After Altria's October 25 Letter to the FDA was released publicly, Willard forwarded the letter to JLI's Pritzker, Valani, and Burns. F. 896. The evidence fails to demonstrate that Altria discussed with JLI its decision to withdraw pod and non-traditional flavored cig-a-like products before sending its October 25 Letter to the FDA or that JLI had any advance notice that Altria was going to take the actions announced in the October 25 Letter. Rather, the unrebutted testimony is to the contrary, that Altria did not in fact discuss its decision with JLI prior to sending the October 25 Letter to the FDA, and that JLI did not in fact have advance notice. F. 897-899.

Altria anticipated that JLI would be unhappy with Altria's October 25 Letter to the FDA, particularly because the letter said that Altria "believed that pod products substantially contributed to the youth epidemic." F.900. JLI witnesses testified that they were surprised by Altria's actions. F. 902. Valani viewed the letter as a "hostile action towards JUUL." F. 902. As Pritzker described it, Altria's move was not expected or welcomed by JLI:

> I was and JUUL was perfectly happy to have those products stay on the market until an FTC decision. We were expecting it. We thought it was appropriate for the FTC to – to determine what should become of them and expected that it would be divestiture. We thought it was an FTC matter and not something for – for a premature action. So it was not welcomed. I thought it would complicate things.

F. 903.

Pritzker further explained that he was "surprised" that Altria had withdrawn the products "unilaterally" because:

> [Altria] never seemed to mind divesting those products as part of – of what I thought to be agreed-upon strategy in which they would stay on the market, there would be a regulatory process, and I ultimately expected that [Altria] would not take them off the market. They'd be expected to divest them so that they remained in the market.

F. 904.

On October 25, 2018, after JLI had received Altria's October 25 Letter to the FDA, Altria's Willard and Gifford spoke to JLI's Pritzker, Valani, and Burns by telephone. F. 905. Altria was unsure that JLI would be willing to continue negotiating with Altria after the October

25 Letter. F. 907. During that telephone call, Willard conveyed that Altria was still interested in making a deal with JLI. F. 905. Pritzker remained skeptical that Altria was sincere about making a deal, including because Altria's "unilaterally taking products off the market" was "complicating" any deal and "seemed inconsistent" with the parties' conversations that those assets would be operated until Altria "sold them or [was] required to sell them" in connection with a regulatory review. F. 906. Pritzker testified: "I never wanted a unilateral withdrawal of the products." F. 906.

d. October 28 and 30 Term Sheets

Notwithstanding Altria's October 25 Letter to the FDA, JLI was willing to continue negotiating with Altria. F. 908.

On October 28, 2018, Altria attorneys met with JLI attorneys. JLI's outside counsel circulated a revised term sheet ("October 28 Term Sheet"), which contained essentially the same structure as the October 15 Term Sheet with respect to the treatment of Altria's existing e-vapor assets. F. 908-909. The October 28 Term Sheet maintained the proposal that Altria offer to divest its e-vapor assets "if necessary to obtain Antitrust Clearance," and if those assets were not otherwise transferred to a third party, to contribute such assets to JLI upon receipt of antitrust clearance. F. 909. The non-compete provision of the October 28 Term Sheet maintained from prior term sheets the explicit carve-out for "MarkTen and MarkTen Elite prior to their contribution or divestiture" in connection with the antitrust clearance process. F. 911.

The October 28 Term Sheet also accepted Altria's proposal to delay filing for HSR review, as provided in the October 15 Term Sheet, but changed the filing deadline to be a date certain of July 15, 2020, in order to accommodate an agreement Altria had with Philip Morris International ("PMI").[16] F. 910. *See* F. 886-890.[17] Such delay in seeking antitrust clearance also

[16] PMI is an international company that manufactures and sells various nicotine containing products, including e-cigarettes. In 2008, PMI split from its former parent, Altria, with PMI focusing on international markets and Altria focusing on the U.S. markets. F. 72 n.40.

[17] The October 15 Term Sheet provided that Altria would "elect the time (not to exceed two years from closing of the Purchase) when the parties initiate the HSR clearance process." F. 886. Altria added this term to make sure that it could divest or contribute its e-vapor portfolio, if requested by the FTC to obtain antitrust clearance, without potentially impacting a preexisting agreement with PMI. F. 886. There had been an issue whether an agreement between Altria and PMI known as the E-Vapor Joint Research, Development and Technology Sharing Agreement

"push[ed] back the date when [Altria] would be on [JLI's] board," which, in Garnick's view, "was fine with JLI . . . ." F. 919.

After a meeting among the negotiators on October 29, 2018, the prospects of a deal appeared sufficiently promising that Altria and JLI decided to "allow attorneys to start putting together the full documentation and [to] negotiate the remaining open issues and the fine details of the agreement." F. 913-914. On October 30, 2018, JLI's outside legal counsel circulated a final term sheet, which was expressly non-binding ("October 30 Final Term Sheet"). F. 916.

The October 30 Final Term Sheet maintained the same structure for treatment of Altria's existing e-vapor products as the October 28 Term Sheet, which was that Altria would either contribute or divest its existing products as part of the HSR clearance process. The non-compete provision remained unchanged from the October 28 Term Sheet, including its exemption for "MarkTen and MarkTen Elite prior to their contribution or divestiture" as part of the HSR clearance process. F. 917. The proposed delay in HSR filing to a deadline of July 15, 2020 was acceptable to both Altria and JLI. F. 918.

With respect to support services to be provided by Altria to JLI, the October 28 Term Sheet and the October 30 Final Term Sheet, as did the October 15 Term Sheet, distinguished between two types of services that Altria could provide to JLI after the closing of the transaction. F. 920. Some services that were anticipated to be provided by Altria to JLI could be provided immediately upon closing the transaction, including Altria's supporting, consulting, and assisting JLI in obtaining PMTA approval for JLI's products. F. 921. Other services anticipated to be provided after closing the transaction were referred to as enhanced services ("Enhanced Services"). F. 922. Enhanced Services included assisting with JLI's marketing; assisting with JLI's "efforts to gain distribution, display and in-store support"; and providing JLI with access to Altria's "best in class infrastructure (including distribution)." F. 922. Enhanced Services could not be provided so long as Altria and JLI remained competitors in the e-vapor category because of antitrust considerations. F. 922.

("JRDTA") restricted Altria's ability to divest or contribute its e-vapor products to a third party during the term of the agreement. F. 887-888. The JRDTA was set to expire on July 15, 2020, unless the parties negotiated an extension. F. 889. Allowing Altria to delay HSR filing until July 2020 "avoid[ed]" any potential issue with the PMI agreement and allowed Altria to divest or contribute its existing products. F. 890.

6. November – December 2018

a. Negotiations between Altria and JLI

A deal between Altria and JLI was not certain in November 2018. F. 931. In November 2018, Altria began due diligence, which is "always" a very important step in any transaction. F. 930-931. Due diligence took "at least a month." F. 932. From the beginning of November 2018 until the closing of the Transaction on December 20, 2018, Altria and JLI exchanged draft transaction documents. F. 933.

Several issues arose in December 2018. As of December 8, 2018, the parties were seeking to close the deal by December 21, 2018 and identified "10 or so outstanding issues" that still needed to be resolved. F. 940. On December 15, 2018, an issue arose regarding what Altria perceived to be an effort by JLI to dilute Altria's share position by half a billion dollars. F. 945. Contemporaneous text messages between Willard and Devitre show Devitre stating that the dilution issue was a "critical" one on which Altria "should not give in." Willard responded, that if JLI did not "give," "the deal will not proceed." F. 945. Furthermore, an "eleventh-hour" issue arose as to valuation of JLI, related to the dilution issue, that Willard described in a text message as "an impasse." F. 947.

b. December 7, 2018 Withdrawal of Cig-a-likes

On December 7, 2018, Willard sent an internal email to Altria employees announcing that the company would be discontinuing "production and distribution of all MarkTen and Green Smoke e-vapor products" (cig-a-likes) and the company issued a public press release saying the same ("December 7 Announcement"). F. 687. Unrebutted testimony from principals of JLI shows that JLI did not receive any prior notice of Altria's December 7 Announcement, and that no one at JLI had requested that Altria take that action. F. 938-939.

In the course of Altria's annual budget process in the fall of 2018, Altria realized that both of the simultaneous pathways Altria was pursuing to grow its e-vapor business – developing a leapfrog product through the Growth Teams or making an investment in JLI – would require a substantial financial commitment. F. 655. Altria anticipated that each Growth Team would cost

approximately $30 million per year, and Altria was prepared to allocate more money if necessary. F. 657. If Altria completed an investment deal with JLI, Altria "needed to find about $500 million in cost savings [per year] to pay for it." F. 658. Gifford believed, "as the financial person," that Altria "needed to . . . free up the resources to fund the growth teams, or make the decision to fund . . . [the] interest related to an investment." F. 659.

Nu Mark had consistently lost money. From 2014 to 2017, Nu Mark lost $600 million. F. 661. In its 2017 three-year strategic plan, Nu Mark had predicted that it would likely lose $33 million in 2018. F. 672. In fact, Nu Mark lost $101 million in the first nine months of 2018. F. 675. As of December 3, 2018, Nu Mark was projected to lose $235 million over the next three years. F. 680.

Moreover, cig-a-likes were a rapidly declining market. As Gifford and Begley advised the Altria Board in May 2018, pods were on a stark upward trajectory, while the cig-a-like share of the e-vapor market was "plummeting," from in excess of 70 percent share in January 2016 to 36 percent in January 2018. F. 524. Shortly before Altria discontinued MarkTen in December 2018, cig-a-like cartridge volume had fallen to less than 19 percent of the total volume of e-cigarette cartridges sold. F. 963. This dramatic shift away from cig-a-likes to pods is particularly significant for Altria because 90 percent of its sales of e-cigarettes in 2018 were cig-a-likes. F. 181, 974.

Altria was willing to accept losses to make a long-term investment in e-vapor, but, as Begley explained, "there had to be a reasonable path to profitability at some point in the future." F. 679. Every year that Begley was the CEO of Nu Mark, the point in the future at which Nu Mark hoped that it would break even or make a profit was pushed out further. F. 669. In 2015, Nu Mark predicted that it would become profitable in 2017. F. 670. In 2016, Altria pushed its profitability projection for Nu Mark to 2018. F. 671. In its 2017 three-year strategic plan, Nu Mark had predicted that it would likely lose $33 million in 2018 and Nu Mark's 2017 plan "pushed out another year" the estimated break-even point to 2019. F. 672. By February of 2018, Nu Mark was estimating that it would potentially turn a profit in 2020. F. 674. The fact that projections for when Nu Mark would break even and turn a profit were repeatedly pushed out in time was "troubling" to Gifford, as the CFO of Altria. F. 673.

Altria also had regulatory concerns with respect to Nu Mark's products, which in December 2018 consisted of tobacco, menthol and mint-flavored cig-a-likes. In the summer of 2018, a portfolio assessment team within Altria rated each of Nu Mark's cig-a-like products as having limited conversion potential, which must be demonstrated for FDA approval. F. 567. By the summer of 2018, Altria's scientists advised that "no one thinks we can get a PMTA on current Mark Ten product[s]." F. 541. The MarkTen cig-a-likes that lacked nicotine salts were rated as having "low" conversion potential. F. 567. MarkTen Bold was rated as having "low to medium" conversion potential, with the caveat that it was in a declining product format and did not have the "optimal ratio of nicotine and salts" to "provide expected nicotine satisfaction." F. 567. In addition, MarkTen Bold had high pH, meaning that it was losing approximately half of its nicotine into the mouth and throat region. F. 463. A smoker trying MarkTen Bold would have to take anywhere from "25 to 30 puffs to really get closer" to the nicotine satisfaction of a conventional cigarette. F. 468.

Moreover, Altria still did not have a clear fix for the MarkTen cig-a-like's dry-puffing issue that would enable FDA approval of the cig-a-likes. Altria had determined in March 2018 that fixing the MarkTen cig-a-like's dry puffing issue would require "fairly significant . . . changes" to be made to the product, including the battery. F. 401, 403. In late November 2018, Altria learned that the new BVR 2.8 battery that Altria was developing for dry puff prevention in its cig-a-likes was "generating a relatively significant percentage less aerosol" resulting in "mass degradation." F. 682. Altria's scientists discovered that there were problems with the cig-a-like's wicking rate,[18] which had decreased with the new BVR 2.8 battery, and with the cartridge, which needed to be heat treated (known as "annealing") in order for the dry puff prevention technology to work properly. F. 683. Altria scientists worked to resolve the issues that arose regarding the BVR 2.8 battery, but were unable to do so, and they were ultimately unsure that they had any dry puff prevention fix that could be submitted for a PMTA. F. 684-686.

In summary, as explained by Willard, "[Altria] was making hard decisions to cut costs on products that hadn't worked out, and so [it] ultimately decided to eliminate these e-vapor

[18] Wicking rate is the "rate at which the liquid reache[s] the heater" which then results in the aerosol mass. (Gardner (Altria) Tr. 2573-74).

products." F. 692. As Altria's Chief Growth Officer Crosthwaite testified, Altria decided it "would be better served putting resources towards future platforms and not supporting the [cig-a-like] platform." F. 692.

c. Closing of Transaction and Final Documents

Ultimately, Altria and JLI reached an agreement on all terms, and on December 20, 2018, Altria and JLI executed final transaction documents. F. 947-948. The final documents included a "Purchase Agreement," a "Relationship Agreement," a "Services Agreement," and a "Voting Agreement." F. 948 (collectively, the "Transaction Documents").

Pursuant to the Transaction, Altria invested $12.8 billion dollars in JLI in exchange for a 35 percent economic interest, obtained the right to appoint one-third of JLI's directors pending HSR approval, imposed some restrictions on JLI's sale rights, and imposed some restrictions preventing Altria from acquiring control of JLI. F. 949. The Services Agreement requires Altria to provide JLI with regulatory assistance in connection with the preparation and filing of JLI's PMTAs, among other services. F. 950.

A non-compete provision is contained in the Relationship Agreement. F. 951. That provision, which remained unchanged in the course of the exchange of draft transaction documents in November and December 2018, binds Altria "not to, directly or indirectly, . . . own, manage, operate, control, engage in or assist others in engaging in, the e-Vapor Business" while the Services Agreement remained in effect. F. 951, 954. Notwithstanding Altria's previous discontinuation of its e-vapor products, the non-compete provision maintained a carve-out for "business relating to . . . its Green Smoke, MarkTen and MarkTen Elite brands, . . . as such business is presently conducted," pending HSR approval. F. 951. The non-compete provision provides for a six-year initial term, making it set to expire on December 20, 2024 unless extended by the parties. F. 953.

Altria disbanded its e-cigarette Growth Teams upon closing the JLI Transaction because Altria was ceasing development work on e-cigarettes due to the Transaction. F. 696. As Garnick acknowledged, Altria would have continued to fund the Growth Teams had the JLI Transaction not occurred. F. 696.

Nu Mark as a business was shut down toward the end of 2018, and Nu Mark as an entity no longer exists. F. 697. Altria's Garnick confirmed in a January 2, 2019 email that going forward Altria would have no role in e-cigarettes and that Altria R&D would not relate to e-cigarettes. F. 698.

D. Count I – Unlawful Agreement

To sustain a claim under Section 1 of the Sherman Act, the evidence must prove that (1) "there was a contract, combination, or conspiracy – or, more simply, an agreement"; and, if so, (2) the agreement "unreasonably restrained trade in the relevant market." *Realcomp,* 635 F.3d at 824. With respect to the first element, Complaint Counsel alleges an agreement not to compete between Altria and JLI, consisting of two parts: (a) an agreement, allegedly reached during the parties' negotiations, requiring Altria to "exit" its then-existing e-vapor business as a condition of any future transaction; and (b) the written non-compete provision, included in the Relationship Agreement executed as part of the Transaction, which bars Altria from competing in the e-vapor market while providing services to JLI post-Transaction pursuant to the Services Agreement. CCB at 31.

It is undisputed that Respondents agreed to the non-compete provision, included as part of the executed Transaction Documents, and therefore, as to the non-compete provision, the evidence proves an agreement, the first element of the Section 1 claim.[19] Whether Respondents also had an agreement to remove Altria's former e-vapor products from the market, *i.e.*, for Altria to "exit" its then-existing e-vapor business, is heavily disputed. Whether the evidence proves such an agreement is analyzed below.

1. Applicable Legal Principles

To establish an agreement forming an antitrust conspiracy, the evidence must prove that the alleged conspirators "had a conscious commitment to a common scheme designed to achieve an unlawful objective." *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 764 (1984) (quoting *Edward J. Sweeney & Sons, Inc. v. Texaco, Inc.*, 637 F.2d 105, 111 (3d Cir. 1980)). Put

[19] Whether the non-compete provision unreasonably restrained trade in the relevant market is addressed in section II.E.2.b.ii., *infra*.

another way, the evidence must prove "a unity of purpose or a common design and understanding, or a meeting of minds in an unlawful arrangement." *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 771 (1984) (quoting *American Tobacco Co. v. United States*, 328 U.S. 781, 810 (1946)). The term "agreement" "necessarily impl[ies] mutual consent." *Esco Corp. v. United States*, 340 F.2d 1000, 1007 (9th Cir. 1965).

An agreement may be demonstrated by direct or circumstantial evidence. *United States v. Apple Inc.*, 952 F. Supp. 2d 638, 689 (S.D.N.Y. 2013), *aff'd,* 791 F.3d 290 (2d Cir. 2015); *In re McWane, Inc.*, 2013 WL 8364918, at *223 (F.T.C. May 1, 2013) (Initial Decision). "[C]ircumstantial evidence of a conspiracy, when considered as a whole, must tend to rule out the possibility of independent action." *In re McWane, Inc.*, 2012 WL 5375161, at *6 (F.T.C. Aug. 9, 2012).

To determine whether an antitrust conspiracy exists, courts must consider the "totality of the evidence." *Apple*, 952 F. Supp. 2d at 689. Where an inference of conspiracy is equally consistent with an inference of independent conduct, "the evidence of conspiracy would not preponderate." *Re/Max Int'l, Inc. v. Realty One, Inc.*, 173 F.3d 995, 1009 (6th Cir. 1999). Thus, the inference of a conspiracy "must be more probable than the inference of independent action" in order to find a conspiracy. *Kreuzer v. American Academy of Periodontology*, 735 F.2d 1479, 1488 n.14 (D.C. Cir. 1984). *See also Anderson News, L.L.C. v. Am. Media, Inc.*, 899 F.3d 87, 98 (2d Cir. 2018) ("[I]f the evidence is in equipoise, then summary judgment must be granted against the plaintiff. . . ."). At all times, "the ultimate burden of persuading the factfinder that a conspiracy exists is on the plaintiff," which, in the instant case, is the government. *Kreuzer*, 735 F.2d at 1488.

"The crucial question" in a Section 1 case "is whether the challenged anticompetitive conduct 'stem[s] from independent decision or from an agreement, tacit or express[.]'" *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 553 (2007) (quoting *Theatre Enters., Inc. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 540 (1954)). With respect to the alleged agreement that Altria would exit its then-existing e-vapor business, the conduct at issue is Altria's removal of its e-vapor products from the market prior to the Transaction with JLI. This conduct, in turn, reflects two different business decisions at two separate points in time, both occurring before the

Transaction: the decision to remove Elite and non-traditional cig-a-like flavors from the market, made internally on or about September 26, 2018 and announced publicly on October 25, 2018, and the decision announced on December 7, 2018 to withdraw Altria's remaining e-vapor products from the market, including MarkTen and Green Smoke cig-a-likes. Thus, the "crucial question" is whether these decisions of Altria's were independent business decisions or were the result of an agreement with JLI.

2. Analysis

The evidentiary record on the "crucial question" of whether Altria's decisions to remove its products from the market "stem[med] from independent decision or from an agreement," *Twombly*, has been thoroughly reviewed and considered. In summary, and explained more fully below, the evidence upon which Complaint Counsel relies is highly circumstantial. As an example, while Complaint Counsel contends that the alleged agreement is demonstrated through the parties' documents, what Complaint Counsel relies on are pieces of writings, sometimes snippets – often ambiguous, lacking in context, and unexplained – and asks that the inference of an agreement be drawn. In contrast, Altria has offered evidence that rebuts Complaint Counsel's requested inferences and has laid out alternative explanations for removing its products that are logical and supported by substantial, credible evidence, including contemporaneous documents. Based on the totality of the evidence, Complaint Counsel has failed to prove that Altria's conduct in removing its e-vapor products from the market stemmed from an agreement with JLI.

a. Negotiation Evidence

Complaint Counsel theorizes that Altria's withdrawing products from the market was to "follow through" on a pre-existing agreement between JLI and Altria, made during negotiations, that Altria would "exit the market," as part of a larger understanding that Altria would not compete with JLI after the contemplated transaction. CCB at 31. Complaint Counsel contends that JLI gave Altria multiple options to accomplish its exit from the market, and that JLI did not care which pathway Altria used to exit the market, so long as Altria ultimately did so. Respondents do not dispute that JLI and Altria contemplated that, in the event of a transaction, Altria would ultimately stop competing with e-vapor products. RRB at 2. As summarized in section II.C.3. above, if Altria were to make the investment in JLI, the parties contemplated that

Altria would take seats on JLI's Board and also provide services to JLI that would give Altria access to sensitive and proprietary information. During the negotiation process, JLI was concerned that, for as long as Altria had access to JLI's trade secrets and operational strategy, Altria could use such proprietary information to compete with JLI. F. 770, 776, 780-781. Respondents contend that JLI did not demand, expect, or agree that anything would be done with Altria's e-vapor assets before the transaction or outside the antitrust review process that was to take place after the contemplated transaction was closed.

To support its conspiracy theory, Complaint Counsel relies principally on the July 30, 2018 term sheet ("July 30 Term Sheet") sent by JLI to Altria – the first term sheet exchanged between the parties – which proposed, in the section pertaining to Antitrust Clearance Matters, that after closing the contemplated transaction, Altria would, within nine months, "divest (or if divestiture is not reasonably practicable, contribute at no cost to [JLI] and if such a contribution is not reasonably practicable, then cease to operate)" all of Altria's e-vapor assets. F. 766. Complaint Counsel's claim that the July 30 Term Sheet gave Altria three "options" to dispose of its e-vapor assets is rejected. Reasonably read, the provision proposed a ranked process for the treatment of Altria's existing e-vapor assets, in connection with the HSR clearance process, commencing first with the obligation for Altria to divest its existing e-vapor assets, if required by regulators. Then, in parentheses, the provision proposed as an alternative, only "if divestiture [were] not reasonably practicable," that Altria would "contribute" its products to JLI at no cost. Lastly, if contribution also were impracticable, the July 30 Term Sheet proposed as a last resort that Altria would "cease to operate" its e-vapor business within nine months following the transaction. In any event, the "cease to operate" language was removed as of the August 9, 2018 term sheet ("August 9 Term Sheet") and did not reappear. F. 795, 810.

Moreover, the totality of the negotiation history belies the assertion that JLI did not care how or when Altria disposed of its then-existing e-vapor products. As previously explained, JLI was concerned that the disposition of Altria's products would be handled properly and insisted on disposition as part of an antitrust review process. Among other material facts, JLI understood from the outset of discussions with Altria that a transaction such as that being contemplated by JLI and Altria "would be closely scrutinized by regulatory agencies, and that antitrust counsel would have to be brought in . . . to optimize the chance" for regulatory approval. F. 741. JLI's

April 20, 2018 letter to Altria, which outlined general terms for a deal structure, directed that antitrust counsel be brought in for the purpose of establishing a plan for "seeking and obtaining regulatory approval" for an investment by Altria "including the treatment of any competitive products owned by Altria." F. 740. JLI expected that regulators would likely require a divestiture of existing products. F. 770; *see also* F. 742. Pritzker explained that it was important to JLI to obtain assurances from Altria that "at the end of the FTC process, if the FTC required anything of Altria, even something that was concessionary in nature, like a potential divesting of products, that [Altria] would agree to those things" and that Altria would "sell those products in the marketplace for whatever they could get for those products at the requirement of the FTC or anything else the FTC would require, for that matter." F. 772. Each term sheet exchanged between the parties expressly required such cooperation with the FTC in the event of a transaction. F. 771, 810, 830, 884.

Furthermore, in responding to Altria's August 9 Term Sheet, JLI objected to Altria's having removed the obligation "to divest" its e-vapor assets as "not acceptable," but was silent on the removal of the "cease to operate" language, F. 817-818, indicating JLI's indifference to the "cease to operate" language. JLI showed its preferred process in the August 19, 2018 term sheet to Altria ("August 19 Term Sheet"), in which JLI did not reinsert the "cease to operate" language and instead proposed that, after the transaction closed, Altria would cooperate with the antitrust clearance process and divest or contribute, its e-vapor products as required or permitted by antitrust regulators. F. 831-832. The August 19 Term Sheet also exempted Altria's then-existing e-vapor products from JLI's proposed non-compete provision, prior to divestiture or contribution, which supports the conclusion that JLI was not particularly concerned about competition from MarkTen and Elite as they existed at that time and intended for those products to stay on the market until divesture or contribution. F. 835.

The treatment of Altria's then-existing e-vapor products post-transaction that was contemplated by the August 19 Term Sheet – divestiture or contribution of the products, in accordance with regulatory review and sanction, and exemption of those products from any non-competition obligation, until such divestiture or contribution – remained essentially unchanged throughout the remainder of the parties' negotiations. F. 885, 891, 909, 911, 917. Thus, to the

extent there was any "meeting of the minds" reached during the parties' negotiations, it is reflected in this structure. F. 839-840.

In addition, Altria's decision to withdraw its pod products from the market was not expected or welcomed by JLI. F. 903. As Pritzker explained:

> [JLI] was perfectly happy to have those products stay on the market until an FTC decision. We were expecting it. We thought it was appropriate for the FTC to – to determine what should become of them and expected that it would be divestiture. We thought it was an FTC matter and not something for – for a premature action. So it was not welcomed. I thought it would complicate things.

F. 903. JLI was not consulted, and had no knowledge, in advance of Altria's decisions to withdraw products from the market. F. 897-899, 938-939. Indeed, JLI was "surprised" by Altria's conduct in taking the products off the market "unilaterally" because, during negotiations, Altria "never seemed to mind divesting [its e-vapor] products" as part of what Pritzker believed was an agreed strategy by which those products "would stay on the market and there would be a regulatory process." F. 904. Pritzker did not expect Altria to "take them off the market. They'd be expected to divest them so that they remained in the market." F. 904. The foregoing facts are inconsistent with a conclusion that JLI demanded, contemplated, or agreed to Altria's conduct.

Complaint Counsel contends that it is sufficient for antitrust liability in the instant case to demonstrate that Respondents agreed that Altria would ultimately divest or contribute its e-vapor assets. Complaint Counsel asserts that it is immaterial that JLI did not know or agree to "exactly how and when Altria would comply" with JLI's alleged demand to "exit the market," and characterizes the terms for how Altria's existing products would be handled in connection with the contemplated transaction as mere "detail[s]" that do not need "to be worked out in order to prove that an agreement exists." CCB at 37.[20] However, the evidence must still prove an

[20] Complaint Counsel seemingly has abandoned what appeared to be its previous conspiracy theory, that JLI demanded that Altria stop selling its e-vapor products prior to any transaction, as a condition of negotiating or entering into a transaction at all. *See* Complaint ¶¶ 4, 5 (alleging that JLI demanded that Altria "exit from the e-cigarette market" as a "condition for any deal"; and that "[i]n order to meet JLI's demand that Altria cease to compete in the e-cigarette market, Altria began taking steps to withdraw its e-cigarettes from the relevant market"); Complaint Counsel's Opening Statement, Tr. 37 ("During deal negotiations, JUUL made it clear that it would only enter into a transaction if Altria agreed to stop competing in e-cigarettes now and in the future."); Remote Telephonic Prehearing Scheduling Conference, Tr. 12 (Aug. 3, 2020) ("The bottom line is this: Juul communicated and Altria knew that it had to get out of the e-cigarette business in order to complete its investment in Juul."). In any event, the evidence fails to prove such a pre-condition. Based on the negotiation evidence, it was always anticipated

agreement. In addition, and more importantly, Complaint Counsel does not directly assert or clearly explain how an agreement to submit a transaction for antitrust review and approval, whereby competitive products of one party would be disposed of, to the extent required or allowed by antitrust authorities, could be deemed an antitrust violation. Moreover, as shown above, how and when Altria would stop selling its existing products post-transaction were not irrelevant details. Rather, the terms were directly negotiated; language regarding ceasing to operate was rejected and not reinserted; and JLI clearly desired and expected that Altria would cooperate with the antitrust review process and that Altria's e-vapor assets would be disposed of in compliance with that process.

In summary, the negotiation evidence shows that Altria's conduct in withdrawing its products from the market was contrary to the desires, expectations, and understanding of JLI and is more consistent with a conclusion of unilateral conduct of Altria, than it is reflective of an agreement with JLI.

Finally, to support its conspiracy theory, Complaint Counsel cites pieces of certain documents exchanged between Respondents during the negotiation period (*see* CCB at 14-15). All of the cited evidence has been reviewed and considered and much of it has already been addressed in the Facts or in this Analysis. In brief, this evidence is not particularly probative – separately or combined – and is not entitled to significant weight. Only a few examples, addressed below, merit discussion.

Complaint Counsel points to a July 27, 2018 email to Pritzker from JLI's adviser at Goldman Sachs, Peter Gross, regarding potential terms to offer Altria, which included the statement, "I was under the impression that [Altria] would just shut down Mark 10." F. 759. Complaint Counsel omits Gross' immediate next sentence, which cautions Pritzker, "We don't want them thinking that they will receive any consideration for co[n]tributing it" to JLI. F. 759. In ascribing no value to Altria's e-vapor products, this statement is consistent with evidence that JLI regarded those products as uncompetitive and "terrible." F. 429, 939. Complaint Counsel

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that the disposition of Altria's assets would not occur until after the contemplated transaction, as part of the process of obtaining antitrust approval for the transaction.

also omits Pritzker's response to Gross, stating his belief that Altria "may need to sell [*i.e.*, divest] it," which is consistent with Pritzker's testimony at trial that he expected antitrust regulators would require Altria to divest its e-vapor products. F. 742, 770, 904. Moreover, Complaint Counsel asserts that Gross "had recently spoken directly" to Willard, prior to making the statement in his July 27, 2018 email to Pritzker, CCB at 14, but the inference that Gross got his "impression" from Willard is unsupported. Complaint Counsel acknowledges that the intended purpose of the call was to discuss valuation. *See* CCFF 673. Gross testified at his deposition that he had not heard from anyone, including Altria or JLI, that Altria was planning to "shut down" its e-vapor business. *See* PX7043 (Gross (Goldman Sachs)) Dep. at 35. Gross further testified that he had heard that Altria's products were inferior, and, from his standpoint advising on valuation, he wanted to avoid "Altria believing that they could" obtain a lower price by contributing those products to JLI. *Id.* at 36-38. Complaint Counsel did not call Gross to testify at trial.

Next, Complaint Counsel points to a statement in draft talking points, prepared for Willard for a telephone call with JLI scheduled for August 6, 2018. The draft talking points included, among other things, the statement that Altria had "come a long way" to accommodate JLI in negotiations, including by meeting JLI's proposed valuation, agreeing to a minority position instead of a controlling one, and "[demonstrating flexibility with our existing vapor business, if necessary, in order to form the partnership]." F. 803 (brackets in original). Complaint Counsel fails to persuasively explain how this vague and ambiguous statement implies an improper agreement to dispose of Altria's e-vapor assets, including by "ceasing to operate" those assets. Innuendo carries little, if any, weight.

In addition, Complaint Counsel relies on the October 5, 2018 letter from Altria to JLI ("October 5 Letter") through which Altria sought to restart negotiations with JLI after the impasse over valuation and control that caused negotiations to break down at the end of August 2018. F. 846-849, 868. Complaint Counsel highlights Altria's proposal in the October 5 Letter that, in the event of a transaction, Altria would agree not to compete with JLI "in a manner consistent with our previous discussions, in the U.S. e-vapor market for any period, exclusive of the [antitrust clearance] transition period, during which [Altria] provides services." F. 877. Although the language in the letter is unclear, Complaint Counsel implies that this language was

meant to refer to the "cease to operate" language or some other unspecified understanding. Complaint Counsel's suggested inference is unsupported and is rejected. JLI understood, reasonably and logically, that the language, "consistent with our previous discussions," meant "consistent with [the] prior draft of the term sheets," the most recent of which was the August 19 Term Sheet sent by JLI. F.878. The non-compete provision proposed in that term sheet contemplated that MarkTen cig-a-likes and Elite would remain on the market, exempt from the non-compete terms, until the assets were divested or contributed in connection with the antitrust review process. F. 835.

Complaint Counsel also points to evidence that a reference to Altria's "exiting" the e-vapor business was inserted into a portion of the October 15, 2018 term sheet ("October 15 Term Sheet"), which addressed the support services Altria would provide to JLI in the event of a transaction. The insertion was an introductory heading to one portion of the support services section, which stated in pertinent part: "Services provided upon earlier of (i) contribution described above or (ii) Richard [Altria] otherwise exiting the marketing and sale of products in the Field ('Contribution Date')." F. 893 (underline in original). The text that followed the heading referenced Altria's provision of certain marketing, distribution, and in-store support services. F. 893. The October 15 Term Sheet distinguished between two types of services that Altria could provide to JLI after the closing of the transaction. F. 920; *see also* F. 834 (August 19 Term Sheet). It was Altria's understanding that some services, such as Altria's supporting, consulting, and assisting JLI in obtaining PMTA approval for JLI's products, could be provided immediately upon closing the transaction; however, certain other services (referred to as "Enhanced Services"), such as assisting with JLI's marketing and distribution, could not, in compliance with antitrust law, be provided to JLI if Altria were a competitor of JLI's. F. 893, 921-923. Altria's in-house counsel, Garnick, explained that outside legal counsel added the underlined language "to ensure that [Altria was] protected and in compliance with the antitrust laws before . . . [it] provide[d] those enhanced services that [Altria] could not provide as long as [it was] a [competitor]." F. 893. The inference that the insertion to the October 15 Term Sheet was referring, directly or indirectly, to a mutual understanding as to the disposition of Altria's then-existing e-vapor products is weak and unpersuasive.

b. Timeline Evidence

Complaint Counsel argues that Altria's actions to discontinue its e-cigarette products, when juxtaposed against certain points in the negotiations, support an inference that Altria withdrew MarkTen Elite and MarkTen cig-a-likes pursuant to an agreement with JLI to do so. CCB at 38-39. Complaint Counsel relies on *In re Urethane Antitrust Litigation*, 913 F. Supp. 2d 1145 (D. Kan. 2012). In that case, the court, in finding that triable issues of fact prevented summary judgment, relied in part on evidence of communications involving pricing and meetings among the defendant companies that occurred "at or near the time" of the joint price increases that were the subject of the alleged agreement. *Id.* at 1155. However, the court also relied on direct testimony of witnesses, including admissions, and circumstantial evidence that bolstered the direct evidence, including parallel conduct in imposing price increases, "suspect communications" between executives at the companies, and efforts to maintain secrecy among the alleged co-conspirators, none of which is asserted in the instant case. *Id.* at 1154-55.

In any event, as shown below, the chronology Complaint Counsel lays out fails to take into account important context for Altria's actions and instead merely juxtaposes negotiation events and business events, and then urges linkages that are not supported by evidence. In this regard, Complaint Counsel's chronology appears to be impermissibly "first assuming a conspiracy and then explaining the evidence accordingly." *Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan*, 203 F.3d 1028, 1033 (8th Cir. 2000). "[W]here proof is lacking, . . . it is [not] fair or appropriate to fill in the blanks . . . to assist the government in winning its case." *McWane*, 2013 WL 8364918, at *289. Accordingly, the timeline evidence relied on by Complaint Counsel is entitled to, and is given, little weight.

Statement by Gifford at August 3, 2018 Altria Management Meeting

Complaint Counsel first asserts that, at an August 3, 2018 meeting among Altria's senior management ("August 3 Meeting"), Gifford "suggested . . . the possibility of withdrawing MarkTen Elite from the market." Complaint Counsel notes that this was "just four days" after JLI sent Altria the July 30 Term Sheet containing the "cease to operate" language, implying Gifford's comment was driven by that language. However, Complaint Counsel ignores material context for Gifford's comment. Quigley convened the August 3 Meeting of Altria senior

management to update them on Nu Mark's performance for that year. F. 575. Quigley advised management at this meeting that Nu Mark "[l]ack[ed] quality pod products"; Elite had design flaws; Elite had not "proven to deliver broadly" "a satisfying, enjoyable nicotine experience"; Nu Mark's attempt at making Elite into "a quality and successful pod product had failed or was on its way to failure"; and Nu Mark would be "limited to competing" in the cig-a-like segment, which was declining. F. 576-581. To redirect Nu Mark going forward, Quigley proposed a "bridge plan," that contemplated Nu Mark developing an improved product that could obtain FDA approval and could be put on the market by 2025. F. 584. Against the foregoing backdrop, Gifford's inquiring whether Altria should consider pulling Elite from the market is reasonable. Gifford also noted at the August 3 Meeting that Altria was "losing money" and did not "have the nicotine we need," and questioned why Altria was "continuing to lose money on this piece of shit business." F. 587. Complaint Counsel also ignores that Quigley agreed it made sense for Gifford to raise the issue regarding Elite. F. 588.

Regardless, as of the August 3 Meeting, Quigley had a directive from Willard, who was responsible for such decisions, to continue to work on the Elite business, which is inconsistent with the theory that Gifford's comment shows that Altria was acting on an alleged demand from JLI to withdraw Elite from the market. F. 589.

August 10, 2018 decisions regarding Elite Gasket and Cig-a-like PMTA

Complaint Counsel contends that at an August 10, 2018 meeting, Altria decided to implement a new gasket to address Elite's leaking problem and to continue working on the PMTA for the MarkTen cig-a-like products. Complaint Counsel argues that these decisions were based upon Altria's having stricken the divest/contribute/"cease to operate" provision in Altria's August 9 Term Sheet sent to JLI. However, there is no evidence tying these events together. Moreover, the underlying premise – that senior leadership of a major company was erratically veering, over a matter of days, from planning to pull Elite from the market to pushing for continued investment in the product – based on positions taken in early term sheets – is unpersuasive, as inconsistent with common sense.

August 23, 2018 Board Meeting

Complaint Counsel argues that Respondents' negotiations in mid-August 2018, whereby JLI and Altria settled on a structure for divestment or contribution of Altria's then-existing products in the event of a future transaction (*see* F. 839-840), were the reasons for the contents of a slide presentation made at the August 23, 2018 Board Meeting ("August 23 Board Meeting"). Complaint Counsel argues that Altria leadership skewed the presentation to paint a negative picture of Nu Mark's products, ostensibly to mislead its own Board into agreeing to withdraw the products. This again suggests, implausibly, that Altria leadership veered back from supporting Nu Mark's products to plotting to remove them from the market in a span of days. The inference is unsupported and unpersuasive.

Complaint Counsel points to an August 14, 2018 email that Quigley sent to Crosthwaite upon reviewing a draft of the slide presentation at issue, stating that it was "clearly only the bad news version of the story" and inaccurate in its assessment of the cig-a-like business as declining. CCB at 40. Complaint Counsel ignores that Garnick began working with his regulatory team to put together a presentation for the August 23 Board Meeting on July 12, 2018, and that the first draft of the presentation was completed July 15, 2018 ("July 15 Draft Presentation"), which was weeks before Altria and JLI exchanged the first term sheet on July 30, 2018. F. 568, 570. Moreover, the relevant slides pertaining to concerns about Elite and MarkTen cig-a-likes did not materially change from the draft to the final presentation. F. 592. For example, both the draft presentation and the final presentation conveyed that Elite could not satisfy three of the four criteria necessary to obtain PMTA approval (manufacturing, risk reduction, and adult smoker conversion) and that MarkTen cig-a-likes could not satisfy two of the four criteria necessary to obtain PMTA approval (meaningful risk reduction and adult smoker conversion). F. 572-573, 593-594. These conclusions regarding Nu Mark products' problems and bleak regulatory prospects came from scientists and other technical experts in Altria's regulatory sciences division, who were not involved in the Altria/JLI investment negotiations,[21] and the conclusions were also consistent with months' worth of internal investigation and inquiry.

[21] The fact that the same members of Altria senior leadership would be responsible for overseeing strategic decision making regarding the Nu Mark operating company and a high-level potential investment with JLI is not inherently suspicious and does not imply a conspiracy.

F. 539-567, 570-571. Furthermore, every Altria employee who was asked about the August 23 Board Presentation at trial or in a deposition affirmed that it was accurate, including Quigley. F. 597.

September and October 2018 actions regarding Elite

Complaint Counsel next argues that Altria's decision to withdraw Elite (as well as non-traditional cig-a-like flavors) from the market stemmed from the progress of negotiations with JLI that occurred in October of 2018. However, this argument is belied by the fact that senior leadership of Altria made the decision to withdraw all pods and non-traditional cig-a-like flavors from the market in September of 2018, after internal consideration of the September 12 Letter from the FDA, at a time when negotiations between JLI and Altria had broken down over issues of valuation and control, and not over proposed terms for post-transaction competition between JLI and Altria. F. 611, 614, 619-623, 842-850. *See In re Brand Name Prescription Drugs Antitrust Litig.*, 288 F.3d 1028, 1034 (7th Cir. 2002) (attributing one party's actions to an agreement was "shaky" when those actions predated the alleged agreement).

As explained in section II.C.4., *supra*, by September of 2018, after a months-long process of review that began with the Level Setting Meeting in June of 2018, Altria concluded that Nu Mark's products had "failed to be successful in the marketplace," including because of the lack of nicotine salts, and that a "different approach" was needed. In September of 2018, having concluded that success with Elite was unlikely, Altria decided to establish Growth Teams, whose purpose would be to develop a product that had the potential to leapfrog JUUL. F. 600-602. For the purpose of funding and transitioning to Growth Teams, on September 10, 2018, Altria's regulatory team took an inventory of ongoing projects. F. 606-607. Based on that inventory, on September 17, 2018, Willard approved a plan to establish the Growth Teams and discontinue all work on Elite. F. 610. Thereafter, Altria's leadership team gathered for Altria's annual planning meeting from September 25 to 27, 2018, at Altria's off-site facility in Montana, known as the Ranch ("September Ranch Meeting"). F. 613. By the time of the September Ranch Meeting, there was agreement among Altria's and Nu Mark's leaders that pulling pod products and non-traditional flavors from the market were two ways that the company should and would respond to the FDA's concerns. F. 614. Altria leadership presented its decision to do so at the September

Ranch Meeting. As summarized in a slide presented by Quigley at the meeting on September 26, 2018, Altria leadership decided "in response to [the] FDA," that Altria would "remove" its pod-based products Elite and Apex from the marketplace, as well as non-traditional flavored cig-a-like products (defined as all flavors other than tobacco, menthol, or mint). F. 620-621.

Complaint Counsel next argues that the fact that Altria did not publicly announce the decision to withdraw Elite (as well as non-traditional cig-a-like flavors) until October 25, 2018 implies a connection between the decision and negotiations between Altria and JLI that resumed in early October 2018. Complaint Counsel asserts that Altria delayed the announcement until Altria was confident that negotiations with JLI were back on track. However, the implication that Altria's leadership would have changed course on its previous decision to withdraw Elite, had JLI not responded favorably to restarting negotiations, is unsupported in the record. Moreover, as Quigley explained, Altria management thought it would be inappropriate to announce the decision publicly before telling the FDA, which Altria did at an October 18, 2018 meeting with the FDA Commissioner. F. 646-647. In addition, Willard believed that the investment community was entitled to an explanation of Altria's plans, before a public announcement, and therefore timed the release of the public announcement to coincide with the third quarter earnings call, which took place on the morning of October 25, 2018. F. 652. These reasonable explanations conclusively rebut Complaint Counsel's suggested contrary inference.

December 7, 2018 Nu Mark Discontinuation Announcement

Complaint Counsel relies heavily on the fact that Altria announced the discontinuation of Nu Mark on December 7, 2018, two weeks before the Transaction was executed on December 20, 2018. Complaint Counsel argues that the evidence proves that Altria "took this course of action *because* of the JLI Transaction." CCB at 44 (emphasis in original). Complaint Counsel's argument is misplaced. In determining whether there was an agreement under Section 1, the issue is whether the discontinuation of Nu Mark stemmed from the alleged agreement to "exit the market," supposedly formed during the parties' negotiations. Whether Altria made its decision to discontinue Nu Mark "because of" the anticipated future transaction with Altria is a distinct issue, more appropriately addressed in the context of evaluating whether the

discontinuation of Nu Mark should be considered a potential anticompetitive effect of the Transaction, for purposes of the Section 7 claim. *See* section II.E.2.b.i., *infra.*

c. Miscellaneous Circumstantial Evidence

i. Common Motive

Complaint Counsel argues that Altria's withdrawing its e-vapor products from the market, instead of divesting or contributing them after the Transaction was executed, "provided benefits" to both Altria and JLI. CCB at 45. Complaint Counsel analogizes evidence of a resulting benefit to each party to evidence of "common motive," a so-called "plus factor" that courts may look to as circumstantial evidence of an agreement between joint actors in a parallel conduct case. *See United States v. Apple, Inc.*, 791 F.3d 290, 315 (2d Cir. 2015). As this is not a parallel conduct case, it is unclear that "plus factors" have any application. *See In re Benco Dental Supply Co.*, 2019 WL 5419393, at *59 (F.T.C. Oct. 15, 2019) (Initial Decision) (holding that where evidence failed to prove parallel conduct, assessing "plus factors" was "arguably illogical," but addressing such factors "for the sake of completeness"). As in *Benco*, the so-called "plus factors" raised by Complaint Counsel will be addressed.

Complaint Counsel posits that Altria was motivated to withdraw its products because Altria wanted to take seats on JLI's Board of Directors, which pre-Transaction term sheets contemplated would not occur until the antitrust clearance process was completed and Altria's products were divested or contributed. *See, e.g.*, F. 763, 870. To support this theory, Complaint Counsel points out that pre-Transaction term sheets contemplated that Altria could delay filing for antitrust clearance until July 15, 2020, which avoided potential complications arising from Altria's agreement with PMI (which was set to expire on that date). F. 889-890, 910. The final Purchase Agreement altered that timing to require both Altria and JLI to make their HSR filings within 90 days of the closing of the Transaction. F. 958. Complaint Counsel cites no evidence justifying a conclusion that Altria was anxious to take Board seats, much less justifying a further inference that Altria would discontinue product lines in order to expedite it. Moreover, the fact that the final Purchase Agreement required filing within 90 days is consistent with accounting for changed circumstances and does not imply Altria was motivated to expedite obtaining Board seats.

Complaint Counsel contends that JLI was motivated by wanting to receive the Enhanced Services that Altria was expected to provide after the contemplated transaction, which services were to be delayed until after Altria had divested or contributed its e-vapor assets pursuant to the anticipated antitrust clearance process. F. 921-922. Complaint Counsel asserts that JLI was eager for Altria to start providing these services, and that JLI saw the services as important benefits of the contemplated transaction. As noted previously, the services that were expected to be provided immediately upon closing of the contemplated transaction included Altria's supporting, consulting, and assisting JLI in obtaining PMTA approval for its products. F. 921. The Enhanced Services, which were expected to be provided only after Altria was no longer selling its own e-vapor products, included assisting with JLI's marketing and assisting with JLI's efforts to gain distribution, display, and in-store support. F. 922.

The evidence does not support a conclusion that JLI was so "eager" for the contemplated Enhanced Services to begin, or that such services were so important, that JLI would be motivated to conspire with Altria to make it happen earlier rather than later. Moreover, contrary testimony rebuts Complaint Counsel's suggested inference. Pritzker testified that while the expected Enhanced Services were valuable, delaying the start of those services would not have been seen as a problem. F. 924. Pritzker further testified that it was important that Altria demonstrate during negotiations that they were prepared to provide the services, in the event of a transaction with JLI, but that the Enhanced Services were not "critical service[s]" and "when they started would not have been consequential" to him. F. 924. It was the regulatory services that were anticipated that would be "invaluable" to JLI, as PMTA approval is "literally existential" for JLI. F. 925. Complaint Counsel offers no basis for concluding that JLI was more motivated by, or would benefit more by, the Enhanced Services than the other anticipated support services.

ii. Action Contrary to Economic Interest

Complaint Counsel next contends that it was against Altria's unilateral economic interest to discontinue Nu Mark, absent a conspiracy, which is another "plus-factor" that may be considered as circumstantial evidence of conspiracy in a parallel conduct case. *Apple*, 952 F. Supp. 2d at 690.

Actions against unilateral interest by an alleged participant in a conspiracy means "conduct that would be irrational assuming that the defendant operated in a competitive market." *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 360-61 (3d Cir. 2004). The challenged action "must be so unusual that in the absence of an advance agreement, no reasonable firm would have engaged in it." *In re Baby Food Antitrust Litig.*, 166 F.3d 112, 135 (3d Cir. 1999). *See also City of Tuscaloosa v. Harcros Chems., Inc.*, 158 F.3d 548, 572 (11th Cir. 1998) (describing actions against interest as "behavior [that] would not be reasonable or explicable (i.e. not in their legitimate economic self-interest) if they were not conspiring to fix prices or otherwise restrain trade"). Courts "must exercise prudence in labeling a given action as being contrary to the actor's economic interests, lest we be too quick to second-guess well-intentioned business judgments of all kinds." *Williamson Oil Co., Inc. v. Philip Morris USA*, 346 F.3d 1287, 1310 (11th Cir. 2003). *See In re Citric Acid Litig.*, 191 F.3d 1090, 1101 (9th Cir. 1999) ("Courts have recognized that firms must have broad discretion to make decisions based on their judgments of what is best for them and that business judgments should not be second-guessed even where the evidence concerning the rationality of the challenged activities might be subject to reasonable dispute.").

Applying the foregoing standards, Complaint Counsel's argument is rejected. Complaint Counsel relies on evidence that Altria viewed market leadership in e-vapor as "critically important" in light of the decline of traditional, combustible cigarettes; that Altria was willing to incur short-term losses to achieve the leadership goal; that some industry participants were surprised by Altria's actions in withdrawing products; and that the investment community had surmised that Altria's December 7, 2018 announcement of the discontinuation of Nu Mark was connected to rumors of an upcoming deal with JLI. Such evidence does not justify a conclusion that it was economically irrational for Altria to discontinue its e-vapor products, or that no reasonable company would have done so. Moreover, as detailed in section II.K.5. of the Facts and summarized in section II.C.6.b. above, the evidence shows that at the time Altria discontinued Nu Mark, Nu Mark had been losing money for years and was projected to lose over $200 million in the next three years. Altria executives had concluded that there was no reasonable path to long-term profitability and that its products faced considerable barriers to

obtaining PMTA approval. Such evidence weighs against a finding that it was against Altria's interest to discontinue Nu Mark, absent a prior agreement to do so.

iii. January 2020 Amendments to Transaction Documents

Complaint Counsel next relies on certain amendments that JLI and Altria made to the Transaction Documents in January 2020 ("January 20 Amendments"). Specifically, the January 20 Amendments allow Altria to be released from the terms of the Transaction's non-compete provision: (1) if JLI were "prohibited as a matter of federal law" from selling e-vapor products in the United States for at least 12 months, unless a PMTA had been pending for at least six months; or (2) if the "aggregate value" of Altria's shares in JLI were written down to $1.28 billion or less. F. 961. Complaint Counsel argues this shows that Altria would be competing on its own, but for the Transaction. As stated previously, however, the issue for purposes of proving the alleged agreement requiring Altria to exit its then-existing e-vapor business under Section 1 is whether Altria's discontinuing Nu Mark was in furtherance of, or pursuant to, an agreement, allegedly made during negotiations, that Altria would take such action. Whether Altria made its decision to discontinue Nu Mark "because of" the anticipated future transaction with Altria is a different issue, more appropriately addressed in the context of evaluating whether the discontinuation of Nu Mark should be considered a potential anticompetitive effect of the Transaction for purposes of the Section 7 claim. *See* section II.E.2.b.i., *infra*.

iv. Pretext

Complaint Counsel asserts that Respondents' proffered explanations for Altria's decisions to withdraw its e-vapor products are pretextual, and that proof of pretext supports an inference of conspiracy. However, as Complaint Counsel's cited case, *White v. R.M. Packer Co.*, 635 F.3d 571 (1st Cir. 2011), makes clear, "'pretext' standing alone is not sufficient" to establish an agreement "but can only strengthen an inference of joint action that is otherwise in evidence." *Id.* at 585. This stems from the fact that a "plaintiff cannot make [its] case just by asking the [fact finder] to disbelieve the defendant's" evidence. *McWane*, 2013 WL 8364918, at *267 (*quoting In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 655 (7th Cir. 2002)). Moreover, in *Rossi v. Standard Roofing*, 156 F.3d 452 (3d Cir. 1998) and *Fragale & Sons Beverage Co. v. Dill*, 760 F.2d 469 (3d Cir. 1985), also cited by Complaint Counsel, there was direct evidence,

and circumstantial evidence, apart from pretext evidence, that supported an inference of conspiracy. In the instant case, there is no direct evidence of the alleged agreement between JLI and Altria for Altria to cease selling its then-existing e-vapor products, including as a condition of any future transaction, and there is little, if any, circumstantial evidence meriting weight. Under these circumstances, Complaint Counsel's attempt to rely on supposed pretext as affirmative evidence of the alleged agreement is unjustified and is rejected.

At best, proof of "pretextual excuses" can constitute "circumstantial evidence that can disprove the likelihood of independent action." *Rossi,* 156 F.3d at 478; *see also Fragale & Sons*, 760 F.2d at 474 (stating that "evidence of pretext, if believed by [the fact finder], would disprove the likelihood of independent action"). In this context, Complaint Counsel, as the proponent of a factual finding of pretext, bears the burden of proving that Respondents' asserted reasons for withdrawing the products from the market are in fact false. 16 C.F.R. § 3.43(a) ("[T]he proponent of any factual proposition shall be required to sustain the burden of proof with respect thereto."). Similarly, Complaint Counsel has the ultimate burden of proving that Altria's withdrawing products from the market stems from the alleged agreement with JLI that it would do so, as opposed to independent action by Altria. As stated in *Kreuzer*, 735 F.2d at 1488, "the ultimate burden of persuading the factfinder that a conspiracy exists is on the plaintiff," which, in this case, is the government.

d. Likelihood of Independent Action/Pretext

As noted above, the "crucial question" in a Section 1 case "is whether the challenged anticompetitive conduct 'stem[s] from independent decision or from an agreement.'" *Twombly,* 550 U.S. at 553 (citations omitted). "Where there is an independent business justification for a defendant's behavior, an inference of conspiracy is not easily drawn." *McWane*, 2013 WL 8364918, at *253. As addressed below, there is substantial credible evidence of Altria's independent decision making, based on demonstrated business reasons. This evidence, when weighed against the lack of evidence of the alleged agreement, is sufficient to rebut an inference that Altria's withdrawal of products from the market stemmed from an agreement with or demand by JLI that Altria do so; and Complaint Counsel's asserted evidence of pretext fails to effectively rebut that evidence.

i. Altria's Decision to Pull Elite and Non-Traditional Cig-a-like Flavors from the Market

As previously noted, Altria made two separate decisions at two separate points in time to remove its e-vapor products from the market. The first of these decisions, to discontinue Nu Mark's pod products and non-traditional cig-a-like flavors, was made in September 2018 and announced on October 25, 2018. As shown below, the evidence on Altria's decision to discontinue pod products and flavored cig-a-likes is at least as consistent with an independent business decision as with an agreement with JLI; and Complaint Counsel's argument that Altria's asserted reasons were pretextual is unsupported.

As detailed in section III.K.2. of the Facts and summarized in section II.C.2. above, as a result of the in-depth assessments that Altria's Quigley and Garnick had completed over the summer of 2018, Altria concluded that (1) Elite was a commercial failure with dim prospects of success given its lack of nicotine salts; and (2) Elite was unlikely to get FDA approval, due to its technical deficiencies and inability to convert smokers. Elite was not a successful product, never exceeding a one percent market share in cartridges, despite increasingly heavy promotional activity by Nu Mark, to the point that the company was practically giving the product away free. *See* sections III.I.4. and III.I.5. of the Facts.

One of the reasons for Elite's lack of competitiveness is that it lacked nicotine salts, the key ingredient to an e-vapor product's commercial success. F. 445-447, 455, 474-476. Quigley, who was not involved in the JLI negotiations, reported to senior management at the Level Setting Meeting in June 2018, the scientists' determination that nicotine salts are "required" to provide nicotine satisfaction. F. 553; *see also* F. 558 (presentation at the Level Setting Meeting by Jupe highlighting that Elite would not be able to compete successfully without higher nicotine levels). Senior leadership's recognition of these problems occurred before Altria received the first term sheet from JLI on July 30, 2018. Quigley again advised senior management in early August 2018 that Elite was not a competitive product because of its lack of nicotine salts. F. 576, 580.

Furthermore, Altria's scientists had concluded that Elite could not obtain FDA approval, which was another reason contributing to Altria's decision to pull its pod products from the market. Soon after Altria had acquired Elite, Altria realized that a number of changes would be

needed, both to appeal to consumers and to receive regulatory approval.[22] F. 378-385, 411-412. Elite had design problems, including that it lacked dry puff prevention technology, contained nickel wire, and contained ABS plastic. F. 380-382. Because of design problems, Altria believed that the PMTA for Elite faced "increased application risk" and an "uncertain authorization outcome." F. 378. By June 2018, senior management had been briefed on the magnitude of the problems with Elite, and shortly thereafter began preparing to inform the Board of these problems at the next scheduled Board meeting in August 2018. F. 552-563, 568-569. The final presentation to the Board on August 23, 2018 conveyed that Elite could not satisfy three of the four criteria necessary to obtain PMTA approval. F. 594. Garnick conveyed that the primary problem, shared by all of Nu Mark's products, was lack of smoker conversion. F. 596. The conclusions in the presentation regarding Nu Mark products' problems and regulatory prospects came from scientists and other technical experts in regulatory sciences, who were not involved in the Altria/JLI negotiations. F. 570-571, 575.

Finally, within hours of receiving the FDA's September 12, 2018 Letter, Altria's executives began to consider whether the company should discontinue certain products in response to the FDA letter, at a time when negotiations with JLI had stalled. F. 611, 848-852. Since April 2018, the FDA had been expressing greater concern that e-cigarettes, particularly pod products and non-traditional flavors, were "getting into kids' hands." F. 272. In its September 12, 2018 Letter, the FDA called for prompt action to address the FDA's concerns; required Altria to respond within 60 days with actions that Altria would take to address the FDA's concerns;[23] and specifically suggested that Altria remove flavored products from the

[22] Altria was able to address the problem with leaking pods. Some of its fixes included training workers on how to assemble the devices and changing the way the pods were shipped from China. F. 504-505. In addition, Willard approved the production of Elite with a new gasket. F. 513. After approving the production of Elite with the new gasket, and after further discussions, Willard reversed his approval, and decided that the new gasket should not be implemented due to the regulatory risk it might create. F. 514. Willard's reversal as to implementation of the gasket change notwithstanding, the gasket change was implemented. F. 515. The new gasket reduced leaking in MarkTen Elite. F. 517-518. However, it did not remedy Elite's lack of nicotine satisfaction and Elite's issue with leaking "was not a primary factor in [Altria's] deciding to discontinue the product." F. 519-520.

[23] In support of its claim that Altria's asserted concern about the FDA Letter was pretextual, Complaint Counsel points to a document from early October 2018 in which Altria's General Counsel Murray Garnick recommended telling the Altria Board that Altria was "seriously considering unilaterally taking off MarkTen Elite from the market" due to the FDA's youth vaping concerns, and cited several reasons for taking the action at that time, including that it "gives [Altria] good cover and story for taking MarkTen Elite off market now." F. 630. As Garnick testified, he immediately followed up the "good cover" reference in that document with additional points that

market. F. 280-282.[24]

As a participant in a heavily regulated industry, Altria's relationship with its regulator is critical. F. 286. As Willard explained, "there were few things [Altria] took more seriously than" comments and guidance from the FDA because the "FDA had regulatory authority over the US tobacco business, and they ultimately decided which products could stay on the market, [and] which products had to be removed from the market." F. 286. Altria's incentive for taking significant steps to satisfy the FDA makes sense, undercutting Complaint Counsel's pretext argument. *See Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko*, LLP, 540 U.S. 398, 411 (2004) (Antitrust inquiries must "careful[ly] account" for "the pervasive federal and state regulation characteristic of [an] industry."). This context for Willard's decision, combined with the fact that JLI was not seeking that Altria withdraw its products from the market, not only rebuts an inference of pretext but also supports the inference that Altria's decision stemmed from independent decision making rather than from a conspiracy with JLI.[25]

The timing of Altria's decision to pull the products also undermines any claim of pretext, and further supports an inference that Altria's decision stems from independent decision making based on demonstrated business reasons, and not from a demand by or agreement with JLI to do so. Altria made the decision to pull Elite at the September 26 Ranch Meeting, when negotiations

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explained what he meant, including that Elite was "not a JUUL fighter and not worth [a] PMTA so [Altria would] have to take it off the market eventually; this is better context." F. 630-631. That Altria might not have wanted to publicly admit failure with regard to Elite is at least as likely as the innuendo urged by Complaint Counsel. Moreover, the implication that the "good cover" is a reference to "covering" for an agreement with JLI is belied by the fact that in the same document, Garnick wrote that discontinuing Elite was a "bold step" and "unilateral action" that Altria was taking "regardless of" a potential future investment in JLI. F. 630.

[24] Subsequently, in January 2020, the FDA required all non-tobacco, non-menthol flavored cartridge-based e-cigarettes (such as fruit and mint-flavored pods and cig-a-likes) to be removed from the market until they receive PMTA approval. F. 289-290.

[25] In its October 25 Letter to the FDA, Altria announced that it would withdraw its pod products from the market, stating that although Altria did not believe it had a "current issue with youth access to or use of [its] pod-based products," it did "not want to risk contributing to the issue" with a product that was not converting adult smokers. F. 649. Complaint Counsel argues that it was pretext for Altria to claim its decision to pull Elite was related to concern about youth e-vapor usage because Altria later chose to invest in JLI, which markets JUUL. This argument does not account for the fact that, unlike Nu Mark's products, JUUL had demonstrated that it could convert adult smokers. F. 430, 623. In any event, as explained above, even if the evidence supported a finding that Altria's purported concern about youth usage was pretextual, such evidence would not constitute affirmative evidence of the alleged agreement and would not be sufficient circumstantial evidence to outweigh the evidence of Altria acting independently.

with JLI had been broken down for a month. F. 619-621, 848-852. In addition, Altria anticipated that JLI would be unhappy with Altria's October 25 Letter to the FDA, F. 900, and, in fact, the evidence shows that JLI was "shocked" by the October 25 announcement. F. 902; *see also* F. 903-904. These facts are also inconsistent with an inference of a prior agreement to withdraw Elite.

In summary, the evidence regarding Altria's withdrawal of its non-traditional flavored cig-a-likes and pod products from the market is at least as consistent with a finding of independent action as with an inference of a conspiracy with JLI for Altria to take such action; and Complaint Counsel's argument that Altria's reasons were pretextual is rejected.

ii. Altria's Decision to Withdraw Remaining Cig-a-likes and Close Nu Mark

The second decision at issue was Altria's decision to withdraw its remaining cig-a-like products from the market, which Altria announced on December 7, 2018, and to close Nu Mark. F. 687-688, 697. Altria's announcement stated that the decision was motivated by the "current and expected financial performance [of these products], coupled with regulatory restrictions that burden [Altria's] ability to quickly improve these products." F. 691; *see also* F. 690. As shown below, the evidence fails to prove that Altria's reasons were pretextual and the evidence is at least as consistent with independent decision making by Altria as with an inference that, in withdrawing its cig-a-likes from the market and closing Nu Mark, Altria was complying with an agreement with or demand by JLI to do so.

Nu Mark incurred more than $700 million in losses when it was in operation and by December 2018, Altria was projecting at least another $235 million in losses for Nu Mark over the next three years with no expectation of growing volume. F. 661, 675, 680. Nu Mark's only remaining e-vapor products were traditional flavors in the cig-a-like segment, a segment that was in "free-fall," as described by Willard. F. 523. With only cig-a-like products and without a successful pod-based product, Nu Mark "had no chance of achieving [its financial projections]" and would continue to incur losses. F 676. Furthermore, as summarized in section II.C.6.b. above, Altria believed that Nu Mark's remaining e-vapor products had little prospect of securing FDA approval, particularly since, in November 2018, new problems were emerging in

connection with Altria's effort to address MarkTen's formaldehyde problem caused by dry puffing. F. 682-686.

To support its claim of pretext, Complaint Counsel points to the relative proximity in time between Nu Mark's shutdown and the closing of the Transaction. However, as stated previously in section II.D.2.b. above, whether Altria's decision to withdraw cig-a-likes from the market and close Nu Mark stemmed from a prior commitment to or demand by JLI, or from independent business reasons, is the operative question for a Section 1 claim. To the extent those independent business reasons included consideration of the likelihood of closing the contemplated transaction with JLI, the issue is more appropriately considered in connection with assessing potential anticompetitive effects of the Transaction. *Infra* section II.E.2.b. In addition, the evidence shows that Altria makes its annual budgeting determinations every December and that in December 2018, Altria realized that both of the "two pathways" Altria was pursuing to grow its e-vapor business – developing a leapfrog product through the Growth Teams or the potential investment in JLI – would require a substantial financial commitment. F 655. Altria decided to stop making the MarkTen cig-a-like products to save money in order to fund either the Growth Teams or, if Altria and JLI were able to finalize the terms, to fund Altria's investment in JLI. F. 654. In December of 2018, terms were still being negotiated between JLI and Altria and a deal was, at that time, uncertain. F. 931, 940-945. The fact that the discontinuations of the products "predate[d]" any certainty about getting the deal done with JLI undercuts Complaint Counsel's pretextual argument. *See In re Pool Prods. Distrib. Mkt. Antitrust Litig.*, 158 F. Supp. 3d 544, 568 (E.D. La. 2016).

In addition, the theory that Altria's reasons for discontinuing its products are pretext for an agreement with JLI is undercut by the fact that Altria did not withdraw all its e-vapor products at once. Instead, it made two separate decisions months apart in response to separate business exigencies: (1) the FDA's demand for "bold action" on youth usage rates in September 2018; and (2) the budgetary issues that the company was facing in December 2018. If JLI were in fact insisting that Altria completely exit the e-vapor category as a condition of the investment, it would not make sense for Altria to remove those products in stages. Moreover, when Altria shut down Nu Mark, this also resulted in the discontinuation of Verve, an oral nicotine product, which would not have been subject to the non-compete provision contemplated in the context of a

transaction with JLI. F. 688. Like Altria's remaining cig-a-like products, "there was no sign [Verve] was ever going to be successful," and so Altria discontinued it as well. F. 689.

Finally, JLI was unaware of Altria's decision to withdraw Nu Mark's remaining cig-a-like products and did not register it as a notable event. F. 938. As characterized by JLI's Valani, Altria's decision was "irrelevant." F. 939. To JLI, the MarkTen cig-a-likes were not "a competitive entity in the market." F. 939. Neither Pritzker nor Valani could remember learning, prior to this litigation, that Altria had shut down Nu Mark and removed its remaining cig-a-like products in December 2018. F. 939. Such evidence is also inconsistent with an inference of a prior agreement.

In summary, the evidence regarding Altria's withdrawal of its cig-a-likes from the market and the closing of Nu Mark is at least as consistent with independent action as with an inference of a conspiracy with JLI for Altria to take such action; and Complaint Counsel's argument that Altria's reasons were pretextual is unsupported and is rejected.

3. Conclusion

For all the foregoing reasons, and based on the totality of the evidence, extensively reviewed in the Facts and in this Analysis, the evidence fails to prove the alleged agreement between Altria and JLI for Altria to stop competing with its existing products.

Ordinarily, the analysis would next turn to the issue of whether the evidence proves that the written non-compete provision, the terms of which are contained in the Relationship Agreement portion of the Transaction Documents, is an unreasonable restraint of trade under Section 1. As noted in section II.B. above, the parties agree that the evaluation of the non-compete provision as an unreasonable restraint of trade under Section 1 is to be analyzed under the rule of reason. CCB at 58 n.17; RB at 88. The rule of reason in this context requires, at a minimum, a showing of anticompetitive effects. *Impax Labs., Inc. v. FTC*, 994 F.3d 484, 492 (5th Cir. 2021) (stating that the "initial burden is on the FTC to show anticompetitive effects"). Similarly, the Section 7 claim requires proof that "the effect of [an] acquisition may be substantially to lessen competition . . . ." 15 U.S.C. § 18. Accordingly, since both the Section 1 claim and the Section 7 claim require an analysis of anticompetitive effects, in the interest of

efficiency and avoiding undue repetition, the Analysis will turn to the Section 7 claim for an assessment of anticompetitive effects.

E. Count II – Unlawful Transaction

1. Applicable Legal Standards

Section 7 of the Clayton Act prohibits the acquisition of "the whole or any part of the stock or other share capital" where "the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. Section 7 applies to partial acquisitions such as the instant case. *United States v. E. I. du Pont de Nemours & Co.*, 353 U.S. 586, 592 (1957) ("[A]ny acquisition by one corporation of all or any part of the stock of another corporation, competitor or not, is within the reach of [Section 7 of the Clayton Act] whenever the reasonable likelihood appears that the acquisition will result in a restraint of commerce or in the creation of a monopoly of any line of commerce.").[26]

Under Section 7, "the government must show a reasonable probability that the proposed transaction would substantially lessen competition in the future." *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1218 (11th Cir. 1991); *Lektro-Vend Corp. v. Vendo Co.*, 660 F.2d 255, 274 (7th Cir. 1981). "Congress used the words '*may* be substantially to lessen competition' to indicate that its concern was with probabilities, not certainties." *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 713 (D.C. Cir. 2001) (*quoting Brown Shoe*, 370 U.S. at 323). "Thus, to establish a violation of Section 7, the FTC need not show that the challenged merger or acquisition *will* lessen competition, but only that the loss of competition is a 'sufficiently probable and imminent' result of the merger or acquisition." *CCC Holdings*, 605 F. Supp. 2d at 35 (*quoting United States v. Marine Bancorp., Inc*., 418 U.S. 602, 623 n.22 (1974)).

Courts and the Commission have traditionally analyzed Section 7 claims under a burden shifting framework. *See, e.g., United States v. Anthem, Inc.*, 855 F.3d 345, 349 (D.C. Cir. 2017); *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982-83 (D.C. Cir. 1990); *In re ProMedica*

[26] The allegation that an acquisition is a Section 5 violation, as well as a Section 7 violation, "does not require an independent analysis . . . . " *Chicago Bridge*, 2005 FTC LEXIS 215, at **8 n.23. *Accord FTC v. PPG Indus., Inc.*, 798 F.2d 1500, 1501 n.2 (D.C. Cir. 1986) (stating that Section 5 of the FTC Act "may be assumed to be merely repetitive of [Section] 7 of the Clayton Act").

Health Systems, Inc., 2012 WL 2450574, at *30 (F.T.C. June 25, 2012). Under this framework, the government can establish a presumption of liability by defining a relevant product and geographic market and showing that the transaction will lead to undue concentration in that market. *See United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 363 (1963); *Baker Hughes*, 908 F.2d at 982-83. The typical measure for determining market concentration is the Herfindahl-Hirschman Index (the "HHI"). *CCC Holdings*, 605 F. Supp. 2d at 37. The HHI calculates market power by summing the squares of the individual market shares of all the firms in the market. *Swedish Match*, 131 F. Supp. 2d at 166 n.11.

The government can bolster the presumption based on market structure with evidence showing that anticompetitive effects are likely. *Heinz*, 246 F.3d at 717. For example, the plaintiff may show that the merger would eliminate significant head-to-head competition, a particularly aggressive competitor in a highly concentrated market, or significant future competition. *See, e.g.*, *Staples*, 970 F. Supp. at 1082-83 (crediting evidence in those categories).

Once the government establishes the prima facie case, the respondent may rebut it by producing evidence to cast doubt on the accuracy of the government's evidence as predictive of future anticompetitive effects. *Chicago Bridge & Iron Co. v. FTC*, 534 F.3d 410, 423 (5th Cir. 2008); *accord Baker Hughes*, 908 F.2d at 982-983. "[E]vidence on a variety of factors can rebut a prima facie case," *Baker Hughes*, 908 F.2d at 984, including "ease of entry into the market, the trend of the market either toward or away from concentration," the "continuation of active price competition," or "unique economic circumstances that undermine the predictive value of the government's statistics." *Heinz*, 246 F.3d at 715 n.7 (internal quotation marks omitted). Rebuttal evidence may also include other factors relating to competition in the relevant market or the competitive or financial weakness of the acquired company. *United States v. Gen. Dynamics Corp.*, 415 U.S. 486, 494-504 (1974); *Baker Hughes*, 908 F.2d at 985-86. Finally, if the respondent successfully rebuts the prima facie case, the burden of production shifts back to the government and merges with the ultimate burden of persuasion, which remains with the government at all times. *Chicago Bridge*, 534 F.3d at 423. Although the burden shifting analysis "conjures up images of a tennis match," *Univ. Health*, 938 F.2d at 1218-19 & n.25, in reality, the evidence is often considered all at once and the burdens are analyzed together. *Id.*; *see also, e.g.*, *Chicago Bridge*, 534 F.3d at 424-25.

2. Reasonable Likelihood of Anticompetitive Effects

a. Market Shares and Concentration

As explained above in section II.B. above, the relevant market in this case is the sale in the United States of closed system e-cigarettes, which encompasses both cig-a-likes and pod-based products. The next step of the analysis is to "consider the likely effects of the proposed acquisition on competition within that market." *Swedish Match*, 131 F. Supp. 2d at 166. Under the applicable legal framework, sufficiently large HHI figures establish "a 'presumption' that the merger will substantially lessen competition."[27] *Heinz*, 246 F.3d at 715 (*citing Baker Hughes*, 908 F.2d at 982); *see also In re Polypore Int'l, Inc*., 2010 WL 9933413, at *22 (F.T.C. Dec. 13, 2010) (applying presumption of competitive harm in markets for various types of battery separators). This presumption of harm is, of course, rebuttable. *See Gen. Dynamics*, 415 U.S. at 497-98.

Complaint Counsel's economic expert witness, Dr. Rothman, measured concentration in the market for closed system e-cigarettes sold in the United States using the HHI as described in the Horizontal Merger Guidelines. F. 175; *Merger Guidelines* § 5.3. Dr. Rothman calculated pre-Transaction HHIs by using market shares derived from sales of units by Altria, JLI, ITG, JTI, NJOY, and Reynolds in the 12-month period beginning October 2017 and ending September 2018, which was before Altria removed any of its e-cigarette products from the market. F.176. As measured by this 12-month period, Dr. Rothman calculated that Altria had a 10.1 percent market share among closed system products. PX5000 (Rothman Expert Report ¶ 89, Tbl. 2).

Respondents first charge that Complaint Counsel must measure the market as it existed at the time of the Transaction in December 2018, when Altria had no e-vapor products on the market. Respondents next criticize Dr. Rothman for using a 12-month period from October 2017 to September 2018 because Altria's market share of e-cigarettes was falling during this period, as a function of the rise in popularity of pods.

[27] The Merger Guidelines consider markets with an HHI above 2500 to be "highly concentrated," and state that "[m]ergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power." *Merger Guidelines* § 5.3; *Heinz*, 246 F.3d at 715.

The evidence demonstrates that during the 12-month period that Dr. Rothman used to measure pre-Transaction HHI, the total market share of e-cigarette cartridge sales volume for cig-a-likes declined rapidly, falling from having a majority (59 percent) in January 2018 to a minority (19 percent) shortly before Altria discontinued sales of MarkTen in December 2018. F. 178. The evidence further shows that during the 12-month period that Dr. Rothman used to measure pre-Transaction HHI, in comparing cig-a-likes versus pod-based device volume sales, the total market share of pod devices increased from 20 percent in October 2017 to over 50 percent by September 2018. F. 179. By September 2018, Altria's share of the closed system e-cigarettes market was 7.5%, as measured by sales of units. F. 180. During the 12 months leading up to December 2018, by which time Altria had discontinued of its e-cigarette products, based on IRI projected data[28] for devices and cartridges, weekly sales of cig-a-likes were essentially flat, whereas weekly sales of pods grew by 619 percent. F. 966.

"The Agencies measure market shares based on the best available indicator of firms' future competitive significance in the relevant market. This may depend upon the type of competitive effect being considered, and on the availability of data. Typically, *annual data* are used . . . ." *Merger Guidelines* § 5.2 (emphasis added). In the particular circumstances of this case, where Altria stopped selling products in the relevant market prior to the Transaction, first in October 2018, with the withdrawal of Elite, and later in December 2018, with the withdrawal of cig-a-likes, Complaint Counsel's economic expert witness properly treated Altria as an existing competitor by analyzing the market that existed prior to October 2018. A similar approach was utilized in *United States v. Aetna Inc.*, 240 F. Supp. 3d 1 (D.D.C. 2017), where the district court accepted the government's market concentration analysis to show that "the proposed merger leads to presumptively anticompetitive levels of market concentration in the three complaint counties in Florida [in 2018, 2019, and 2020]." *Aetna*, 240 F. Supp. 3d at 79, 90. In that case, the government's economic expert witness used "the most recent 2016 market-share data available," which came from the period before Aetna's decision to discontinue selling insurance plans in those counties, to calculate the HHI levels and the district judge cited those

[28] Information Resources, Inc. ("IRI") is a data compiler company that tracks retail sales of products, including e-vapor products and traditional cigarettes. F. 173. IRI projected data is an aggregated view of more than 80,000 sample stores out of a universe of more than 350,000 stores that sell tobacco products. F. 173.

HHI numbers approvingly in the opinion. *Id.* Given the circumstances of this case, Dr. Rothman's reliance on market shares from the most recent 12-month period before Altria stopped selling products in the relevant market to calculate pre-Transaction market shares is appropriate and consistent with the Merger Guidelines.

However, "[m]arket shares may not fully reflect the competitive significance of firms in the market or the impact of a merger." *Merger Guidelines* § 5.3. They do not in this case. Because Altria's share in the market declined over the measured 12-month period, the pre-Transaction market share of 10.1 percent for Altria overstates Altria's competitive significance. *Merger Guidelines* § 5.2 ("[R]ecent or ongoing changes in market conditions may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance."). Where the market share of a supplier is dropping for reasons that are likely to persist, like a declining product as opposed to a one-time disruption, the predictive value of the HHI is lessened. *See Brown Shoe*, 370 U.S. at 322 n.38 ("Statistics reflecting the shares of the market controlled by the industry leaders and the parties to the merger are, of course, the primary index of market power; but only a further examination of the particular market – its structure, history and probable future – can provide the appropriate setting for judging the probable anticompetitive effect of the merger."). Complaint Counsel's expert witness admits that the market shares of cig-a-likes and pod-based systems "reversed" between 2017 and 2019 and that Altria's market share was declining over the one-year period that he used to calculate market share. F. 182-183. Given the continually declining importance of cig-a-likes in the closed system e-cigarettes market (discussed in greater detail in section II.E.2.b.i. above), Altria's historical market share is a poor predictor of what its share would have been in a but-for world in which Altria continued to sell e-cigarette products.

The next step in Dr. Rothman's HHI analysis was to calculate post-Transaction HHIs, which he did by proportionally reallocating Altria's market share to the remaining competitors. PX5000 (Rothman Expert Report ¶¶ 88, 89, Tbl. 2). For example, if, pre-Transaction, Altria had a 10% market share, JLI had a 50% market share, and ITG had a 6% market share, Dr. Rothman assigned 50% of Altria's 10% market share to JLI and 6% of Altria's 10% market share to ITG. *See* PX5000 (Rothman Expert Report ¶¶ 88, 89, Tbl. 2). Using this methodology, Dr. Rothman calculated that the Transaction resulted in an HHI of 3,929 and an increase in HHI of 652 points.

PX7048 (Rothman Trial Dep. at 27-28); PX5000 (Rothman Expert Report ¶ 89). Based on an evaluation of the criticisms of his approach, summarized below, Dr. Rothman's post-Transaction HHI calculations are not economically sound.

Respondents assert that Dr. Rothman made incorrect assumptions about where Altria's market share would go in Altria's absence and argue that most MarkTen cig-a-like customers diverted to other cig-a-like products, not to pod-based products like JUUL or Vuse Alto. Respondents' economic expert witness, Dr. Kevin Murphy, analyzed actual market data from sales of cartridge volume in units for all closed system e-cigarettes from August 2017 to August 2020 and found that Altria's market share was diverted to other cig-a-likes, *i.e.*, products other than JLI's JUUL product. F. 185. Dr. Murphy's analysis is well-founded and undermines the basis for Dr. Rothman's HHI calculations. Moreover, Dr. Rothman's incorrect assumption that JLI would capture half of Altria's diverted sales accounts for 94% of his calculated increase of 652 points in market concentration under the HHI presumption and thus vastly overstates the market concentration increase. F. 186.

Dr. Murphy measured market concentration using actual market data from sales of cartridge volume in units for all closed system e-cigarettes from October 2018 to September 2020. F. 187, 1041. Dr. Murphy's calculations show a decrease in market concentration for all closed system e-cigarette products by 471 points. F. 1041 (showing that HHI fell from 5,493 in October 2018 to 5,022 in September 2020). Dr. Rothman does not dispute that post-Transaction, "HHI levels are . . . lower than they were prior to December 2018." F. 188; *see also* F. 1040. Dr. Murphy's calculations, which are based on actual data showing what has happened post-Transaction, are more persuasive than Dr. Rothman's calculations and diminish the reliability of Dr. Rothman's projections.

"Market definition is a predictive tool that is not always the best vehicle to establish proof of competitive harm and can in some cases obscure rather than expose the competitive effects of a merger." *Polypore*, 2010 WL 9933413, at *9 (citing *In re Evanston Northwestern Healthcare Corp.*, 2007 WL 2286195, at *75 (F.T.C. Aug. 6, 2007)) ("The role of the market definition tool, however, is potentially much less important in merger cases in which the availability of natural experiments allows for direct observation of the effects of competition

between the merging parties, as well as the absence of such competition."). *See also Chicago Bridge*, 534 F.3d at 433 (stating HHIs "should be viewed with caution and within the larger picture of long-term trends and market structure").

Given the defects in Dr. Rothman's HHI calculations summarized above, the evidence fails to prove that the Transaction would lead to undue concentration in the market. Therefore, Complaint Counsel is not entitled to a presumption that the Transaction will substantially lessen competition. *Baker Hughes*, 908 F.2d at 982. However, Complaint Counsel relies not just on a presumption based on market concentration, but also on evidence that Complaint Counsel asserts proves that the Transaction has harmed and will continue to harm competition in the U.S. market for the sale of closed system e-cigarettes. That evidence is reviewed next.

b. Competitive Harm

First, although Complaint Counsel is not entitled to a presumption of harm based on undue market concentration, Complaint Counsel offers direct evidence in an effort to demonstrate actual competitive harm caused by the Transaction, under Section 7 of the Clayton Act. Second, although Complaint Counsel did not prove the alleged unwritten agreement between Altria and JLI for Altria to stop competing with its existing products under Section 1, Complaint Counsel also challenges the written non-compete provision, contained in the Transaction Documents, as unlawful under Section 1 of the Sherman Antitrust Act.

Under Section 7, Complaint Counsel must show that there is a "'reasonable probability' of a substantial impairment of competition . . . ." *Fruehauf Corp. v. FTC*, 603 F.2d 345, 351 (2d Cir. 1979); *Univ. Health*, 938 F.2d at 1218. Under Section 1, Complaint Counsel must prove that "the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market." *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2284 (2018).[29] Because the claims require proof of anticompetitive effects or the reasonable likelihood of anticompetitive effects

[29] As noted earlier, the Complaint expressly alleges a Section 1 violation based upon a rule of reason analysis and Complaint Counsel confirms in its post-trial brief that it does not rely on a *per se* theory. Complaint ¶ 79; CCB at 58 n.17.

and the evidence overlaps, the evidence regarding anticompetitive effects for both the Section 1 claim and the Section 7 claim is considered together.

Complaint Counsel asserts that "but for" the Transaction, Altria's e-vapor products would still be on the market, and that the Transaction eliminated the then-existing competition between Altria and JLI. Complaint Counsel also asserts that the Transaction, in particular the non-compete provision in the Relationship Agreement, through which Altria agreed not to sell or develop new e-vapor products while it was providing services to JLI, harms competition by eliminating potential future competition between Atria and JLI.

Respondents assert that Complaint Counsel failed to prove that Altria would have kept its products on the market but for the Transaction. Respondents further assert that Altria would not have been a significant competitor with Nu Mark's existing products or with products Altria had not yet developed.[30]

i. Elimination of Competition from Altria's Existing Products

(a) Withdrawal of Products from the Market

In September 2018, Altria decided to discontinue Elite, together with its other pod-based product and all non-traditional cig-a-like flavors. As detailed in the Facts, sections III. K.L., and summarized in section II.C. above, in addition to the regulatory pressure from the September 12, 2018 FDA Letter and the myriad of facts demonstrating barriers to successfully commercializing Elite, including lack of nicotine satisfaction and questionable likelihood of PMTA approval, the evidence shows that at the time Altria made the decision to withdraw these products from the market in September 2018, negotiations between Altria and JLI were at an impasse, for reasons

[30] Respondents contend that Complaint Counsel's failure to prove the alleged agreement between JLI and Altria for Altria to stop selling its then-existing products necessarily precludes finding that the withdrawal from the market of Elite in October 2018 and/or the discontinuation of Nu Mark's remaining e-vapor products in December 2018 were "effects" of the Transaction, for purposes of assessing anticompetitive effects under the Section 7 claim. Respondents cite no authority supporting such a proposition. Moreover, logic does not support the proposition. Whether Altria's actions in withdrawing products from the market because of a *prior agreement* with or demand by JLI to do so is a distinct question from whether Altria's actions in that regard – even if undertaken independently – were undertaken because of the then-*potential future* investment in JLI. In any event, as shown below, the evidence fails to prove that Altria's removal of products from the market or discontinuation of Nu Mark has substantially harmed or is reasonably likely to substantially harm competition.

unrelated to terms concerning Altria's then-existing products. JLI's Board had formally cut off continued negotiations and was actively considering an offer from a different potential investor. F. 858, 861. Indeed, Garnick, Altria's General Counsel and one of Altria's principal negotiators with respect to the Transaction (F. 704), believed Altria's pod and flavor products should be withdrawn from the market, as a "bold step" in response to the FDA, "regardless of" any potential deal with JLI. F. 630. Instead, Altria established the Growth Teams in preparation for developing a leapfrog pod-based product to replace Elite entirely. F. 600-602, 610, 632-633. According to Garnick, Altria would not have "pulled the trigger" on transitioning to Growth Teams "if [Altria] thought that the JUUL deal was going to go ahead." F. 610. In summary, the evidence fails to prove Complaint Counsel's contention that Elite would still be on the market, but for the Transaction with JLI.

However, even if the facts supported the inference that Elite would still be on the market, but for the Transaction, Altria was not a meaningful competitor with Elite and the evidence fails to prove that the withdrawal of Elite has substantially harmed or is reasonably likely to substantially harm competition, as explained below.

In early December 2018, Altria decided to discontinue its cig-a-like products and close down Nu Mark, only weeks before closing the Transaction. Whether Altria would have withdrawn its cig-a-likes from the market, but for the Transaction, is a closer question than with respect to the pod-based product, Elite. The evidence supports the conclusion that Altria decided to stop making the MarkTen cig-a-like products in order to save money to fund either the Growth Teams or, if Altria and JLI were able to finalize the terms of the Transaction, to fund Altria's investment in JLI. F. 654. As explained in section II.C.5.b. above, Nu Mark had lost money every year since at least 2015; Altria expected Nu Mark to continue to lose money and did not see a path toward profitability; and Altria was unsure if it could develop a dry puff prevention fix that they could submit for a PMTA. F. 660-686; *see also* F. 401, 408-409. Moreover, as of mid-December 2018, there were a number of outstanding issues remaining to be finalized between Altria and JLI and Altria's Board was advised that "although progress has been made a potential deal with [JLI] is still highly uncertain and subject to many factors." F. 940-941. However, Altria's contention that the withdrawal of the MarkTen cig-a-likes was completely unrelated to the Transaction is unpersuasive. Altria contemplated that the savings from discontinuing cig-a-

likes would be used either for the Growth Teams or, if JLI and Altria finalized terms for the contemplated transaction, to fund the JLI transaction. F. 654.

Ultimately, it need not be decided whether or not the facts support the inference that the MarkTen cig-a-like products would still be on the market, but for the Transaction, because the evidence fails to prove that the withdrawal of Mark Ten cig-a-likes from the market has substantially harmed or is reasonably likely to substantially harm competition, as explained below.[31]

(b) Harm to Competition from Removal of Products

Section 7 requires that Complaint Counsel show that the elimination of competition from Altria "create[s] an appreciable danger of [anticompetitive] consequences in the future." *Hospital Corp. of America v. FTC*, 807 F.2d 1381, 1389 (7th Cir. 1986) (Posner, J.). Section 7 "is concerned with whether an acquisition or merger *itself* may cause antitrust injury." *Geneva Pharms. Tech. Corp. v. Barr Labs. Inc.*, 386 F.3d 485, 511 (2d Cir. 2004) (emphasis in original). The analysis logically and "necessarily 'focus[es] on the future.'" *Aetna*, 240 F. Supp. 3d at 79 (quoting *Baker Hughes*, 908 F.2d at 991); *see also* Merger Guidelines § 1 ("[M]erger analysis is necessarily predictive, requiring an assessment of what will likely happen if a merger proceeds . . .").

The Supreme Court has also stressed that courts must judge "the probable anticompetitive effect of the merger" "functionally" and based on "a further examination of the particular market – its structure, history and probable future . . . ." *Gen. Dynamics*, 415 U.S. at 498 (quoting *Brown Shoe*, 370 U.S. at 321-22 & n.38). "Evidence of past production does not, as a matter of logic,

[31] As previously noted, "the Commission is not required to make subordinate findings on every collateral contention advanced, but only upon those issues of fact, law, or discretion which are 'material.'" *Minneapolis & St. Louis Ry. Co.*, 361 U.S. at 193-94. Issues of fact or law that do not affect the result in a case are not fairly deemed "material," for purposes of Section 557(c)(3)(A) of the APA, 5 U.S.C. § 557(c)(3)(A), or Rule 3.51(c)(1) of the Commission's Rules of Practice, 16 C.F.R. § 3.51(c)(1), notwithstanding that there may be allegations or evidence presented on such issues. Rather, "a fact is only material if its resolution will affect the outcome" of the case. *Lenning*, 260 F.3d at 581 (summary judgment case). *See also Timpa*, 20 F.4th at 1028 (stating in a summary judgment case that "[a] fact is 'material' if it 'might affect the outcome of the suit under the governing law'") (*quoting Anderson*, 477 U.S. at 248).

necessarily give a proper picture of a company's future ability to compete." *Gen. Dynamics*, 415 U.S. at 501.

The evidence in the instant case fails to prove that the elimination of competition from Altria creates an appreciable danger of anticompetitive consequences in the future because the evidence establishes that Altria was not a significant competitor at the time of the Transaction. Furthermore, evidence of Altria's past production does not give a proper picture of Altria's future ability to compete, as analyzed below.

The evidence proves that Altria was not a significant competitor while it was participating in the relevant closed system e-cigarette market. As found in F. 291-295, 524, 579, 699, 963-974, the closed system e-cigarette market was shifting significantly away from cig-a-likes to pods. For instance, IRI sales data shows that in early 2016, cig-a-likes represented more than 90 percent of total e-cigarette cartridge sales volume, but that by December 2018, cig-a-like cartridge sales volume had fallen to less than 19 percent. F. 963; *see also* F. 964. Considering that, in 2018, 90 percent of Altria's sales in the closed system e-cigarette market were cig-a-likes (F. 181, 974), this dramatic shift away from cig-a-likes casts serious doubt on Altria's future ability to compete.

The lack of competitive significance of cig-a-likes in the relevant market of closed system e-cigarettes is also demonstrated by the actions of other e-vapor manufacturers. PMI had commercialized MarkTen cig-a-likes in a test market outside the United States, but then discontinued sales based on low market share. F. 969. Similarly, NJOY has discontinued two of its cig-a-like products. F. 970. While NJOY continues to market a cig-a-like product called the Daily, the Daily's sales volume in 2021 was [redacted] of that of NJOY's Ace pod. F. 971. Reynolds also continues to market cig-a-like products (Vuse Ciro, Vuse Solo, and Vuse Vibe), but shipments for its Vuse Solo cig-a-like fell by almost [redacted] percent between 2018 and 2019, and then fell by an additional [redacted] percent from 2019 to 2020. F. 972. JLI's O'Hara confirmed the weak competitive position of the MarkTen cig-a-like at trial, explaining that Nu Mark's cig-a-like products "were not viable . . . . They didn't have nicotine salts, they didn't satisfy nicotine cravings, and they were cig-a-likes." F. 967; *see also* F. 968, 973 (Category Manager at Sheetz agreeing that the e-vapor category is "overwhelmingly pods").

In addition, as explained in sections II.C.1.b. and II.C.2. above, by the summer of 2018, Altria's leadership was aware that its cig-a-like products were not converting smokers, were not competitive with pod-based products, and were unlikely to obtain FDA approval. For instance, by the summer of 2018, Altria's scientists advised Altria leadership that "no one thinks we can get a PMTA on current Mark Ten product." F. 541; F. 423 (the MarkTen cig-a-like "fell short [of the PMTA standard] on risk reduction and conversion"). Thus, Altria was not well positioned to compete in the closed system e-cigarette market with its cig-a-likes.

With respect to Altria's pod-based products, Apex had minimal distribution and was removed a month after it was launched. F. 984 n.44. It had only been available for online purchase in ten states and only 460 Apex units were sold. F. 984 n.44. Thus, the impact of the withdrawal from the market of Apex to competition is extraordinarily insignificant. Elite never achieved more than a one percent market share of cartridge unit sales among closed systems on the market over the eight months that it had been on the market in 2018. F. 984. The notion that a product with a market share of less than one percent could be a significant competitive constraint is illogical. This is particularly so in this case where the consumer demand was shifting (and has continued to shift) to pods with nicotine salts, a product which Altria never had. *See* F. 1012-1018; F. 445. As explained in II.C.2. above, Altria realized Elite lacked the nicotine formulation needed to be competitive, was not demonstrating conversion potential, and was not likely to obtain FDA approval. Thus, Altria was not well positioned to compete in the closed system e-cigarette market with its pod-based products.

(c) Price, Shelf Space or Innovation Competition

Complaint Counsel also asserts that the Transaction and the non-compete agreement harm competition by eliminating then current and future price, shelf space, and innovation competition from Altria in the U.S. closed system e-cigarette market. As discussed below, the evidence fails to prove Complaint Counsel's claims that the Transaction has substantially harmed or is reasonably likely to cause substantial harm to competition on prices, shelf space, or innovation.

Price

In support of its argument that Altria put pricing pressure on JLI, Complaint Counsel cites to an August 2018 slide deck prepared by ITG, evaluating *my*Blu competitors in retail, which states: "JUUL has responded [to MarkTen Elite] with a kit promotion on both their starter kit and battery." CCB at 60 (citing CCFF ¶ 1429). This uncorroborated hearsay statement of ITG's view of JLI's actions is entitled to little weight. Complaint Counsel also cites to one instance, in March 2018, when JLI launched a device promotion by dropping the JUUL starter kit price by $20. CCB at 61 (citing CCFF ¶ 1434). JLI's promotions were generally planned six months to a year in advance, meaning that a spring 2018 promotion would have been planned by the fall of 2017, long before Elite's launch in February 2018. F. 982. After the launch of Elite, JLI did not respond with new promotions, but ran its "standard" promotion. F. 983. Thus, Complaint Counsel's evidence on whether JLI adjusted its prices in response to competition from Elite is not persuasive. Moreover, Complaint Counsel's expert witness, Dr. Rothman, did not analyze whether JLI changed price in response to the introduction or the removal of Elite. F. 985.

There is also no probative evidence to show that JLI adjusted its prices in response to competition from Altria's cig-a-likes. Dr. Murphy's analysis comparing all cig-a-likes, Altria cig-a-likes, and non-Altria cig-a-likes, shows that as Altria's sales declined following the discontinuation of its cig-a-like products, sales of rival cig-a-like products increased by a nearly equal magnitude, demonstrating that sales of Altria's cig-a-likes diverted to other cig-a-likes, not to pod-based products, and that Altria's cig-a-likes did not constrain JLI's pricing. F. 975. As confirmed by Robbins, JLI's Chief Growth Officer, JLI did not ever change its pricing or promotions in response to the MarkTen cig-a-like products or in response to the withdrawal from the market of MarkTen cig-a-like products. F. 977-978. Furthermore, as discussed below, competition on prices increased post-Transaction. *See* section II.E.2.b.i.(d).

Shelf space

Complaint Counsel fails to persuasively explain how the elimination of shelf space competition from Altria harms competition. Prior to the Transaction, Altria, as the largest tobacco company in the United States, had access to the best shelf space in all the top retailers.

F. 1030. After Altria's products were withdrawn from the market and Altria's shelf space lease to JLI was terminated pursuant to the January 28, 2020 Amended Services Agreement, there was increased competition for shelf space for innovative tobacco products. F. 1032; *see also* F. 1033-1037. Dr. Murphy explained the reallocation of shelf space as follows:

> [O]ne of the things that happens when a firm leaves the market is resources are re-allocated to other uses and often re-allocated within the same marketplace. And the resource that was re-allocated in this case was the shelf space of retailers . . . . [I]f, when that product came off the shelf, other products went on the shelf, the person walking into the store doesn't have less choice. They might even have more choice than they had before. (Murphy Tr. 3130). [W]hen products leave, particularly unsuccessful products, they typically will be replaced. And in this case, it looks like they were. (Murphy Tr. 3134).

This reallocation of shelf space is discussed further below, as an element of increased output, post-Transaction, section II.E.2.b.i.(d).

Innovation

Complaint Counsel also argues that Altria was trying to come up with a product that could compete with JLI and that that competition stopped as a result of the Transaction. The evidence shows that after JLI's early success with a pod-based system, Altria sought to offer a competitive product and failed. There is ample evidence in the record demonstrating that Altria was not a competent innovator of e-vapor products, despite spending billions of dollars. *See, e.g.*, F. 44-54. Considering the FDA's regulatory regime, it was unlikely that Altria could innovate further to compete with JLI, as discussed in section II.E.2.b.ii. *infra*.

In support of its argument that Altria and JLI had been engaged in innovation competition prior to the Transaction, Complaint Counsel asserts that Altria and JLI "competed by offering different nicotine strengths in response to consumer preferences," noting that Robbins advised JLI's CEO at the time, Kevin Burns, that "[a]ll viable competitors . . . offer variable Nicotine Strengths . . . We should too." CCB at 62 (citing CCFF 1473, 1474). There is no evidence that Robbins was referring to Altria, whose e-vapor products JLI regarded as "terrible." F. 429, 939. Further, Robbins' reference to "all" viable competitors shows that differentiation on nicotine strength, even if considered an innovation, was widespread in the e-cigarette market and not a unique feature of any Nu Mark product. Complaint Counsel also asserts that "after Altria

introduced a magnetic pod insertion in its MarkTen Elite, JLI explored magnetic pods for its next generation JUUL devices." CCB at 62 (citing CCFF 1477, 1481). However, any significance of this assertion is belied by the fact that Elite was not the only pod-based product with magnetic pod insertion, since Vuse Alto and NJOY Ace had the same feature. F. 988, 1000.

(d) Competition since the Transaction

To assess a merger's probable effect on competition, the court must undertake a "comprehensive inquiry" into the "future competitive conditions in a given market." *Baker Hughes*, 908 F.2d at 988. "[T]he essential question [in a Section 7 case is] whether the probability of such *future* impact [lessening of competition] exists at the time of trial." *Gen. Dynamics*, 415 U.S. at 505 (emphasis in original); *Lektro-Vend Corp.*, 660 F.2d at 276 ("[T]he probability of anticompetitive effects is judged at the time of trial."). Trial was conducted in June 2021. The Transaction was announced in December 2018. Evidence as it existed at the time of trial necessarily includes post-Transaction evidence.

Absent circumstances suggesting that post-acquisition evidence is the product of a conscious "decision on the part of the merged companies to deliberately but temporarily refrain from anticompetitive actions," such evidence may properly be considered in determining whether the probable effect of a merger will be a substantial lessening of competition. *Gen. Dynamics*, 415 U.S. at 506 ("Such evidence went directly to the question of whether future lessening of competition was probable, and the District Court was fully justified in using it."); *compare Lektro-Vend Corp*., 660 F.2d at 276 (holding that "post-acquisition evidence favorable to a defendant can be an important indicator of the probability of anticompetitive effects," particularly where such evidence "could not reflect deliberate manipulation by the merged companies temporarily to avoid anticompetitive activity") *and United States v. Int'l Harvester Co.*, 564 F.2d 769, 780 (7th Cir. 1977) (holding that post-merger evidence that is "beyond the power of the parties to manipulate" may be properly considered) *with Chicago Bridge*, 534 F.3d at 435 (holding that post-acquisition evidence was not probative where acquiring company could have manipulated the evidence by temporarily allowing competitors to "win a few bids so as to bolster the market's appearance of competitiveness").

The post-Transaction evidence in the instant case, summarized below, shows increased competition driven by aggressive price activity and expansion by third parties, such as Reynolds and NJOY, who are beyond Respondents' control. There is no evidence to suggest that the competitive environment that has prevailed post-Transaction was subject to manipulation by Respondents.[32] *See In re AMR Corp.*, 625 B.R. 215, 250 (Bankr. S.D.N.Y. 2021) (holding that where "evidence . . . center[ed] on market trends involving third parties," there was "little basis, if any, to suggest that the evidence . . . [was] subject to . . . manipulation").

To be clear, "Section 7 does not require proof that a merger or other acquisition caused higher prices in the affected market. All that is necessary is that the merger create an appreciable danger of such consequences in the future. A predictive judgment, necessarily probabilistic and judgmental rather than demonstrable, is called for." *Hospital Corp.*, 807 F.2d at 1389 (citation omitted). Thus, Complaint Counsel is not required to prove that the Transaction resulted in higher prices. However, the evidence in this case demonstrates the contrary, that the prices of JUUL and other e-vapor products declined, output increased, and market concentration decreased post-Transaction.

Prices

In the second half of 2018, competitors commercialized product lines using products that had been introduced in limited quantities before the Deeming Rule went into effect in August 2016. F. 986. The most significant entrants were two pod-based devices: Vuse Alto, launched by Reynolds in August 2018, and NJOY Ace, launched by NJOY by November 2018. F. 987, 999.[33] Unlike Altria's Elite, these pod-based devices used nicotine salts and therefore had the ability to provide the nicotine satisfaction that Elite could not. F. 986; *see also* F. 441, 444.

[32] The aggressive price activity and expansion by NJOY and Reynolds are discussed below. NJOY's Andrew Farrell testified that NJOY's 99-cent promotion, which is ongoing and has disrupted the market, had nothing to do with these proceedings. F. 989. Reynolds' Wade Huckabee confirmed that neither JLI nor Altria "manipulated Reynolds into running [the] 99-cent promotion" that has catapulted Reynolds over JLI with respect to market share of devices. F. 1004.

[33] Ace had been on the market under different ownership prior to August 2016. F 987. Reynolds acquired Vuse Alto after August 2016 and reintroduced the product in August 2018. F. 999.

In 2019, NJOY and Reynolds began "aggressive discounting on devices" designed to "generate trial." F. 989, 1044. NJOY launched a 99-cent promotion beginning in 2019 on its pod-based device, and Reynolds soon followed, reducing the prices of its pod-based devices to 99 cents. F. 989, 1004. The aggressive discounting "cannibalized [JUUL's] growth, and threatened to take its established userbase." F. 995. At one large retail chain, NJOY Ace captured 66 percent of device market share, almost three-quarters of which came "at JUUL's expense." F. 990. By September of 2019, roughly one year after its launch, NJOY had captured nearly 23 percent of total volume share of devices sold in the e-cigarette market segment. F. 991. [redacted] F. 993-994.

Recognizing that a "quick, strong response to NJOY Ace 99¢ [promotion] was necessary to secure Alto's market potential," Reynolds also began rolling out a 99-cent promotion on its Alto device throughout August and September 2019. F. 1004. By December 2019, Reynolds had overtaken JLI as the leading seller of pod-based devices. F. 1008. In 2021, Reynolds was selling "more than twice the number of devices per week" as JLI. F. 1009. Like NJOY, Reynolds saw a similar increase in cartridge sales following its device promotion. F. 1010. Both Reynolds and NJOY, facing sustained price competition, have maintained their 99-cent promotions into 2021. F. 998, 1011.

PMI observed in August 2019, after NJOY "triggered [a] price war" in the e-vapor category, "JUUL's dollar share slipped for the first time." F. 1021. In August 2019, JLI had observed that the company was "facing an aggressive competitive threat for the first time." F. 997. As a JLI internal analysis explained, JUUL users do not perceive JUUL as offering "meaningful advantages to justify its cost," so "it is common and easy for users to try something else." F. 996. Recognizing that it was no longer "priced in line with consumer expectations of the category," and needing to mount a response to the first real "competitive threat" it had faced, JLI abandoned its standard promotions and decided to "close out 2019 with deeper discounts." F. 1019. JLI would later permanently lower the price of its device in response to the new competitive landscape. F. 1020.

Furthermore, the average price of a pod-based device fell from about $27 in September 2018 to around $8 in September 2020, representing a roughly 72 percent reduction in price. F. 1022; *see also* F. 1023. The average price of pod cartridges fell by over 15 percent during the same period. F. 1024. Lower prices are "often . . . the very essence of competition." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 594 (1986).

Output

"Impacts on prices, market output and capacity are generally considered indicators of a merger's competitive impact, and showings of increased output have been found to overcome claims of anticompetitive effects in other antitrust contexts." *AMR Corp.*, 625 B.R. at 255 (*citing Am. Express*, 138 S. Ct. at 2288 (evaluating alleged violations under the Sherman Act). In this case, output has increased since the Transaction. By October 2019, one year after Altria discontinued Elite, sales of pod-based devices had increased by more than 20 percent. F. 1025. Over the same time period, sales of pod cartridges had likewise increased by more than 30 percent. F. 1025. At the time Altria withdrew its pod-based products from the market, Altria was selling only 100,000 Elite cartridges a week. F. 1027. Less than two years later, competitors' sales (excluding sales of JUUL) had increased by more than three million cartridges a week. F. 1027. As Dr. Murphy explained at trial, this reflects "actual market evidence that these other sellers were able to expand the sales of their products on the market dramatically, 31 times what would be required to offset the loss of Elite in this case." F. 1027.

Furthermore, after Altria's discontinuation of its MarkTen products, the average number of e-vapor products in the top 20 retailers increased from 3.0 to 3.8. F. 1028. As Dr. Murphy explained, "when a product leaves the market," other manufacturers have the "ability and incentive . . . to expand, to come in and fill the void," which "creates an opportunity for more attractive products" (Murphy Tr. 3140), and thus the increase in the number of average e-vapor products is evidence of a robust and healthy competitive process. While e-cigarette companies that do not sell conventional cigarettes have struggled to get shelf space for their e-cigarettes, with Altria out of the market, other companies have filled the shelves. *See* F. 1028, 1032-1037. In 2018, MarkTen was "often at the top of the shelves"; in 2019, Reynolds' Vuse "was often in the top half of the shelf." F. 1033. NJOY, too, was able to establish a presence in major

convenience store chains in 2019. F. 1035. "Repositioning" of competitors can offset potential anticompetitive effects (Merger Guidelines § 6.1) and has done so here.

Market share and concentration

Less than a year after the introduction of NJOY's Ace, a pod-based product with nicotine salts, NJOY achieved a 30 percent share of device sales for a time, approximately the same share as JUUL. F. 1038. Reynolds' Vuse Alto surpassed both NJOY and JUUL, capturing about 60 percent of all pod-based device sales as of September 2020. F. 1038. JLI's share of device sales has correspondingly decreased from approximately 69 percent in October 2018 to approximately 30 percent in September 2020. F. 1038; *see also* F. 1039. In addition, JLI lost approximately 20 percent in cartridge unit market share from December 2018 to September 2020. F. 1040.

Importantly, market concentration has significantly *decreased* since the Transaction. Using actual market data from IRI Projected Data for cartridge volume by unit, Dr. Murphy calculated that the HHI for the relevant market in this case, all closed system e-cigarette products, decreased by nearly 500 points from October 2018 to September 2020. F. 1042. "Market concentration is often one useful indicator of likely competitive effects of a merger." Merger Guidelines § 5.3. *See Lektro-Vend*, 660 F.2d at 276-77 (post-acquisition evidence of "dramatically declin[ing]" market share was highly probative because it could not "arguably have been subject to the defendant's deliberate manipulation, nor [was] it likely that the market was less competitive after the acquisition than it would have been otherwise").

(e) Conclusion

"'[A]ntitrust theory and speculation cannot trump facts, and even [preliminary injunction merger] cases must be resolved on the basis of the record evidence relating to the market and its probable future.'" *FTC v. RAG-Stiftung*, 436 F. Supp. 3d 278, 292 (D.D.C. 2020) (quoting *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 116-17 (D.D.C. 2004)). The record evidence relating to prices, output, and market concentration shows that since the Transaction, the closed system e-cigarette market has become more competitive. For all the foregoing reasons, and based on the totality of the evidence, extensively reviewed in the Facts and in this Analysis, the evidence fails to prove that the Transaction has substantially harmed or is reasonably likely to substantially harm competition.

ii. Elimination of Future Competition

As summarized above, Altria ceased all e-cigarette product research and development and disbanded the Growth Teams upon closing the Transaction in order to raise money to fund Altria's investment in JLI. F. 696-698. Furthermore, under the non-compete provision in the Relationship Agreement portion of the Transaction Documents, Altria agreed "not to, directly or indirectly, . . . own, manage, operate, control, engage in or assist others in engaging in, the e-Vapor Business" so long as it was providing services to JLI under the Services Agreement portion of the Transaction Documents. F. 951. The initial term of the non-compete provision was set at six years from closing, to run concurrently with the six-year period Altria agreed to provide services to JLI under the Services Agreement. F. 953.

Complaint Counsel argues that the Transaction – the non-compete provision, in particular – harmed future competition in the e-cigarette market by preventing future price, output, shelf space, and innovation competition with Altria. Complaint Counsel argues preliminarily that, for purposes of future effects analysis, Altria should be considered to have been an actual competitor in the e-cigarette market at the time of the Transaction, rather than an actual potential competitor. Complaint Counsel asserts that Altria had the incentives and resources to compete in the e-cigarette market; Altria was working on improved versions of Elite and its cig-a-like products; Altria was working to develop a leapfrog product through the Growth Teams; and Altria was collaborating with PMI under the Joint Research Development and Technology Sharing Agreement ("JRDTA") to improve and develop e-vapor products; and that all of the foregoing was foreclosed by the Transaction. Complaint Counsel further argues that the Transaction foreclosed the possibility of Altria collaborating with or acquiring smaller competitors. Complaint Counsel relies on substantially the same factual assertions to argue that the Transaction harmed future competition as Complaint Counsel uses to argue, alternatively, that Altria was an actual potential competitor. *See, e.g.*, CCB at 62-65, 80-82, 95-97. Respondents argue that the evidence fails to prove that Altria would have competed in e-vapor with a new or improved product in the near future, either through its own internal efforts or through collaboration or acquisition.

(a) Applicable Legal Principles

Regardless of whether Altria is considered an actual competitor or an actual potential competitor, proving a reasonable likelihood of substantial harm to future competition nonetheless requires proving that such competition, more likely than not, would have existed in the "near future." *See Aetna*, 240 F. Supp. 3d at 93 (treating Aetna as an actual competitor, despite earlier exit, and basing Section 7 liability on the likelihood that Aetna would bring new insurance products to market "in the near future"); *In re B.A.T. Industries, Ltd.*, 1984 WL 565384, at *7-9 (F.T.C. Dec. 17, 1984) (holding that, under the actual potential competition doctrine, the Commission must find, among other things, that the alleged actual potential competitor "would have entered the market independently, either de novo or by making a toehold acquisition," in "the near future"). Moreover, the likelihood of future price, output, shelf space, or innovation competition is logically inextricable from the question of whether Altria would have any competing products on the market in the near future.

The court in *B.A.T. Industries*, explained that "[e]stablishing liability through the actual potential competition doctrine requires establishing four separate facts." 1984 WL 565384, at *7. "First, the Commission must establish that the relevant product and geographic markets are concentrated." *Id.* "In addition to establishing that the target market is concentrated, the Commission must second establish that independent entry would result in a substantial likelihood of ultimately producing deconcentration of [the target] market or other significant procompetitive effects." *Id.* at *8. "Third, the [alleged actual potential entrant] must be one of only a few equally likely actual potential entrants, since eliminating one of many potential entrants could not be expected to eliminate substantial future competition." *Id.* "Fourth and finally, the Commission must establish that the [alleged actual potential entrant] would have entered the market independently, either de novo or by making a toehold acquisition," but for the challenged merger. *Id.* at *9. Establishing this last factor requires proof, not only that the alleged actual potential entrant possesses the "'capabilities, economic incentives, and interest,'" to feasibly enter the relevant market, but also that "entry would have occurred within the near future." *Id.* at *9. *See also Id.* n.31 (citing *Mercantile Texas Corp. v. Board of Governors of Fed. Res. Sys.*, 638 F.2d 1255, 1271-72 (5th Cir. 1981) (holding that independent entry should be expected within two or three years); *Republic of Texas Corp. v. Board of Governors of Fed. Res.*

Sys., 649 F.2d 1026, 1047 (5th Cir. 1981) (holding that the Board's finding of likely entry in the "reasonably foreseeable future" was insufficient and suggesting that a finding of entry within a specified "range of months or years" is necessary).

In *BOC International, Ltd. v. FTC*, 557 F.2d 24 (2d Cir. 1977), relied on by the Commission in *B.A.T. Industries*, the court held that the Commission's finding a "reasonable probability" that the alleged potential entrant would have "eventually entered" the relevant market was insufficient to sustain a Section 7 claim because such an "eventual entry" test was "wholly speculative" in nature. *Id.* at 29. "[S]uch uncabined speculation cannot be the basis of a finding that Section 7 has been violated." *Id.* The court in *BOC International* explained:

> [A]s the Court wrote in *Marine Bancorp.*, "[Section] 7 deals in 'probabilities,' not 'ephemeral possibilities.'" 418 U.S. at 622-23, quoting *Brown Shoe Co. v. United States, supra*, 370 U.S. at 323. Thus the FTC was correct in using a "reasonable probability" test here, but its accompanying reference to "eventual entry" makes the overall FTC test, we believe, one based largely on "ephemeral possibilities."

557 F.2d at 28-29. Instead, to sustain a claim based on potential future competition, the evidence must demonstrate a reasonable probability that the alleged entry will occur in the "near future . . . [s]ince 'remote possibilities are not sufficient to satisfy the test set forth in § 7[.]'" *Id* at 29. *See also Aetna*, 240 F. Supp. 3d at 93. The "near future" is required because the "degree of uncertainty" in any economic prediction as to future market conditions "becomes unacceptably high as it is projected further and further into the future." *Mercantile Texas Corp.*, 638 F.2d at 1271. "At some point in the future," market conditions, such as the degree of concentration in the market, "become[] so inherently unpredictable that the entire predictive enterprise should be abandoned . . . ." *Id.*

As set forth below, the evidence fails to prove a reasonable probability that Altria would have competed in the e-cigarette market in the near future. Even if the evidence established the first three of the four factors that must be demonstrated to establish liability – that the e-cigarette market is concentrated; that Altria's entry with a new product would make the market more competitive; and that Altria was one of only a few likely entrants – Complaint Counsel's argument still must fail because the evidence fails to prove the fourth factor – that Altria possesses the "capabilities, economic incentives, and interest," and that there is a reasonable

probability that entry would occur in the near future, either through Altria's marketing a competing product independently or through collaboration or acquisition.[34] Accordingly, Complaint Counsel's claims as to harm to future competition are rejected. [35]

(b) Analysis

As noted above, apart from exceptions recognized under the Deeming Rule, no e-vapor product can be marketed without first obtaining approval from the FDA, through the PMTA process. F. 196-197, 200. Only the FDA can determine whether a product is "appropriate for the protection of the public health." F. 193, 216. The process is "very demanding" with "rigorous" standards, and the outcome "is uncertain." F. 220. "The presence of [a] regulatory scheme and need for approval" may "convert[] what might have been deemed antitrust injury in a free market into only a speculative exercise," especially where "[t]here are no facts . . . which even permit [a court] to speculate as to the likelihood of" regulatory approval. *City of Pittsburgh v. W. Penn Power Co.*, 147 F.3d 256, 267-68 (3d Cir. 1998). In the instant case, Complaint Counsel failed to proffer evidence or expert opinion as to the likelihood of FDA approval for any hypothetical future e-vapor product. Under these circumstances, to conclude that future products would likely obtain FDA approval and reach the market would require unacceptable and unfair speculation. In fact, Complaint Counsel acknowledges in its brief that "any predictions about which products will or will not receive PMTA approval [is] highly speculative." CCRB at 122 n.62.

[34] The Commission in *B.A.T. Industries*, after evaluating federal appellate court precedents, held that "clear proof that independent entry would have occurred but for the merger or acquisition should be required to establish that a firm is an actual potential competitor" for purposes of Section 7 because a "reasonable probability" standard is "quite ambiguous. The difficulties that the courts have had in identifying the evidence that will show that independent entry is reasonably probable confirm the correctness of that view. For these reasons, we therefore adopt the 'clear proof' standard." *B.A.T. Industries*, 1984 WL 565384, at *10. The Commission, in *In re McWane, Inc.*, 2014 WL 556261, at *32-35 (F.T.C. Jan. 30, 2014), applied a "reasonable probability" standard in determining whether an agreement foreclosed a potential competitor from entering in violation of Section 1. Under either standard, as explained *infra*, Complaint Counsel's proof fails to meet its burden.

[35] Even if it assumed that the MarkTen cig-a-likes would still be on the market but for the Transaction, as explained above, cig-a-likes were a declining market at the time of the Transaction. The record presents no reasonable basis for concluding that the MarkTen cig-a-likes would have been a stronger competitive force in the near future, capable of affecting price, output, innovation, or shelf space competition in the e-vapor market.

Internal development

Even if it is assumed that Altria has the financial resources, economic incentive, and the interest to compete in the e-cigarette market, the evidence fails to prove that Altria had the capability to do so in the near future. In fact, Altria's capabilities to develop a competitive product to bring to market in the near future is questionable at best. In the past, Altria has not been successful in developing e-vapor products. F. 44-54. Altria found that development of electronic products, such as e-cigarettes, required "an entirely different construct" than what was required for conventional tobacco products. F. 50. Quigley assessed that Altria approached product development from the perspective of a cigarette company, while what was needed was to "think more like a technology company," and that Altria needed "different capabilities and different processes." F. 51, 556. Although Nu Mark had pursued at least a half dozen internal projects to develop e-vapor products, many of which were the subject of years of effort, Nu Mark never succeeded in developing from scratch its own e-vapor product. F. 52. Rather, every product that Nu Mark launched into the marketplace resulted from an external acquisition, licensing arrangement, or partnership with another e-vapor company. F. 54.

Moreover, the evidence fails to prove a reasonable probability that any hypothetical product developed by Altria would reach the e-cigarette market in the near future. With product development, the time-consuming PMTA preparation process, and the approval process, at least five years is required to bring a product to market and the process, even if successful, can take as long as ten years, with five to seven years being typical. F. 1049; *see also* III.H.4. Altria's Growth Teams, which were disbanded upon closing the Transaction, were charged with developing a new leapfrog e-vapor product without any product concept at the outset. F. 602, 639, 696. As Jupe, who was tasked with overseeing the Growth Teams, explained the process, the Growth Teams would first need to finish the product definition phase, and then proceed to the development phase, where the Growth Teams would engineer the product. F. 640. After that, they would go to the commercial phase, where they would write all the manufacturing specifications, after which they would "lock" the design. F. 640. This "product development cycle" would take two years, "if you're lucky." F. 640. After design lock, the Growth Teams would begin gathering scientific evidence, which would take approximately two years. F. 640. Then the product goes through FDA review, which could "easily" take 18 months. F. 640. By

this timeline, Altria was at least five to six years away from having any potential product with which to compete in the e-cigarette market. F. 640.

Based on the foregoing, the evidence fails to prove that it is reasonably probable that Altria would have entered the e-cigarette market in the near future, but for the Transaction. The competitive conditions of a market five years in the future cannot reliably be predicted. *Mercantile Texas Corp.*, 638 F.2d at 1272. Moreover, in a heavily regulated industry, such as the e-vapor industry, "regulatory change can quickly alter the structure of the market." *Id.*

Collaboration with PMI

In addition, the evidence fails to prove a reasonable probability that Altria, through collaboration with PMI, would be bringing PMI's VEEV product to the e-vapor market in the near future but for the Transaction, as argued by Complaint Counsel. VEEV is a pod-based e-cigarette product sold by PMI outside the United States. F. 1050. PMI started selling VEEV in late 2020. F. 1051. VEEV uses PMI's proprietary technology, referred to as mesh technology,[36] which was also used in the Apex product, which was a failure in the market. F. 75, 984 n.44, 1053-1054. VEEV and Apex otherwise have a number of differences. F. 1054. Among other things, PMI improved VEEV's form compared to Apex. F. 1055. VEEV is smaller, fits the hand better, and has a more appealing shape than Apex. F. 1055; *see also* F. 616.

Complaint Counsel points to the JRDTA between Altria and PMI, [redacted] F. 889, 1056. Under the JRDTA, [redacted] F. 1056. At the time of Altria's investment in JLI in December 2018, VEEV was several years away from commercialization. F. 1059. Furthermore, the JRDTA did not include any terms as to distribution or details of how commercialization of VEEV would occur. F. 1057. [redacted]

[36] The name "Mesh" refers to the mesh heater that is "like a fine-wire screen, in effect, where you pass electricity through the screen, and that creates the aerosol." F. 1053.

[redacted] F. 1057. For Altria's sales of Apex, Altria signed a separate distribution agreement with PMI, [redacted] F. 1058. Moreover, neither PMI nor Altria can sell VEEV in the United States without first obtaining FDA approval through the PMTA process. *See* F. 196-197, 200. [redacted] F. 1060. King speculated that [redacted] F. 1061. Based on the foregoing, it would be pure conjecture to conclude that a collaboration between Altria and PMI would bring PMI's VEEV product to the e-vapor market within any reasonable future time period.

Other potential collaborations or acquisitions

Complaint Counsel also argues that the Transaction prevented Altria from collaborating with or acquiring other e-vapor companies or products. Complaint Counsel points to evidence that in 2018, Altria identified some potential alternative product or company acquisitions, in the event an investment with JLI did not come to fruition, and discontinued some existing agreements. CCB at 65 (citing CCFF 1717-30). However, Complaint Counsel presented no other evidence or testimony about the probability of any such acquisitions, or demonstrate what, if any, effect on competition such collaborations or acquisitions was reasonably likely to have. To conclude that, but for the Transaction, it was reasonably probable such collaborations or acquisitions would have resulted in competitive entry in the future is "uncabined" speculation.

(c) Conclusion

In summary, Complaint Counsel's argument relies on evidence of Altria's efforts, progress, and plans toward developing new or improved products that could be submitted for PMTA approval, or potentially collaborating with or acquiring other e-vapor companies. As the court stated in *BOC International,* "it seems necessary under Section 7 that the finding of probable entry at least contain some reasonable temporal estimate related to the near future, with 'near' defined in terms of the entry barriers and lead time necessary for entry in the particular

industry, and that the finding be supported by substantial evidence in the record." *BOC Int'l*, 557 F.2d at 29. Complaint Counsel fails to aver or demonstrate a reasonable probability that Altria's efforts would result in Altria competing in the e-cigarette market in the near future, or even identify any reasonable range of time by which such alleged competitive entry was probable to occur. In essence, Complaint Counsel is arguing that due to Altria's resources as a large company, and economic incentives to participate in the e-cigarette market, Altria would have eventually had a product competing in that market. This is precisely the position rejected by the court in *BOC*, above.[37] Accordingly, it is rejected here as well.

3. Conclusion

Complaint Counsel has failed to meet its burden of proving that the Transaction is unlawful under Section 7. Accordingly, Count II of the Complaint must be dismissed.

F. Non-Compete Provision as Violation of Section 1

Complaint Counsel argues that, even if the evidence fails to prove the alleged unwritten agreement between Altria and JLI for Altria to remove its then-existing products from the market, the written non-compete provision, agreed to as part of the Transaction, "is an independent violation of Section 1 under the rule of reason" because of "Altria's status as a 'potential competitor.'" CCB at 68. Complaint Counsel asserts that the anticompetitive harms from the non-compete provision "substantially outweigh any benefits" and the provision is "more restrictive than necessary to achieve" any legitimate, competitive business interest. CCB at 70. Respondents contend that the evidence fails to prove any substantial anticompetitive effect in the relevant market arising from the non-compete provision, and therefore Complaint Counsel fails at "Step 1" of the rule of reason analysis. RB at 129. Respondents further argue that any anticompetitive effects are outweighed by procompetitive benefits from the non-compete

[37] To the extent that Complaint Counsel relies on the opinion of its expert witness, Dr. Rothman, to support its claim that the Transaction harms future competition, the opinion is entitled to no weight. Dr. Rothman, based on his review of certain documents, testimony and data, concluded that the Transaction harms future competition in e-cigarettes because, in his opinion, Altria had the incentives and ability to compete in the e-vapor market. PX7048 (Rothman Trial Dep. at 29-34); PX5000 (Rothman Expert Report ¶¶ 91-129, 131-33). As shown above, precedent is clear that demonstrating incentives and ability to compete, while necessary, is not sufficient to demonstrate a reasonable probability that, but for the challenged transaction, competition would have occurred within the near future. *B.A.T. Industries*, 1984 WL 565384, at *9.

provision, and that Complaint Counsel has failed to demonstrate a viable, less restrictive alternative to the non-compete provision. RB at 131-32.

Explaining the application of the rule of reason in a Section 1 case, the court in *Impax* stated:

> [The] rule-of-reason inquiry uses a burden-shifting framework. *See Ohio v. Am. Express*, 138 S. Ct. 2274, 2284, 201 L. Ed. 2d 678 (2018). The initial burden is on the FTC to show anticompetitive effects. *Id.* If the FTC succeeds in doing so, the burden shifts to Impax to demonstrate that the restraint produced procompetitive benefits. *Id.* If Impax successfully proves procompetitive benefits, then the FTC can demonstrate that any procompetitive effects could be achieved through less anticompetitive means. *Id.* Finally, if the FTC fails to demonstrate a less restrictive alternative way to achieve the procompetitive benefits, the court must balance the anticompetitive and procompetitive effects of the restraint. *Apani Sw., Inc. v. Coca-Cola Enters., Inc.*, 300 F.3d 620, 627 (5th Cir. 2002). If the anticompetitive harms outweigh the procompetitive benefits, then the agreement is illegal. *Id.*

994 F.3d at 492.

Thus, the first question is whether Complaint Counsel has met its initial burden of demonstrating anticompetitive effects from the non-compete provision. As held in section II.E.b.ii.(c) above, the evidence fails to prove a reasonable probability that Altria would have competed in the e-vapor market in the near future, through Altria's marketing a competing product independently or through collaboration or acquisition. Complaint Counsel's claims as to harm to future competition arising from the Transaction have been rejected. Thus, Complaint Counsel has failed to meet its initial burden of proving that the non-compete provision violates Section 1 under the rule of reason. For this reason alone, the analysis should not proceed further. *E.g., Am. Express*, 138 S. Ct. at 2283, 2290 (affirming entry of judgment in favor of defendants because "the plaintiffs have not satisfied the first step of the rule of reason. They have not carried their burden of proving that Amex's antisteering provisions have anticompetitive effects."). *See also Bhan v. NME Hosps., Inc.*, 929 F.2d 1404, 1414 (9th Cir. 1991) (affirming entry of summary judgment and holding that where plaintiff "failed to meet his initial burden of showing" the challenged agreement "substantially restrained competition in a relevant market," the claim "fails under a rule of reason analysis"). Since Complaint Counsel has failed to meet its initial burden, it is illogical and inappropriate to shift the burden to Respondents to nevertheless

prove procompetitive benefits. Complaint Counsel has failed at the outset to sustain its claim that the non-compete provision is unlawful under the rule of reason, and no further analysis is necessary.

Because Complaint Counsel has failed to meet its burden of proof under Count I, both as to the alleged unwritten agreement not to compete with existing products and the written non-compete provision, Count I of the Complaint must be dismissed.

G. Conclusion

Having fully considered the applicable law, the arguments of the Parties, and the entire record in this case, and for all the foregoing reasons, the evidence fails to prove a violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45.

Having fully considered the applicable law, the arguments of the Parties, and the entire record in this case, and for all the foregoing reasons, the evidence fails to prove a violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

Therefore, the Complaint must be DISMISSED.[38]

III. FINDINGS OF FACT

A. Jurisdiction

1. Altria Group, Inc. ("Altria") is a for-profit corporation with its principal place of business at 6601 West Broad Street, Richmond, Virginia 23230. (JX0001 (Joint Stipulations of Law and Fact at 001 ¶ 2)).

2. JUUL Labs, Inc. ("JLI") is a for-profit corporation with its principal place of business at 1000 F Street NW, Washington, D.C., 20004. (JX0001 (Joint Stipulations of Law and Fact at 001 ¶ 6); PX0028 at 006 ¶ 18 (Answer of JLI)).

[38] Given the holdings above that the evidence fails to prove the violations alleged in this case, it is not necessary to address the affirmative defenses raised by Respondents in their Post-trial Brief (RB at 132-38), including that JLI, as a "seller" in the Transaction, cannot be held to have violated Section 7, which addresses acquirers, and that Respondents cannot be held liable in this proceeding because FTC proceedings and the structure of the decision makers are unconstitutional.

3. Altria and JLI engage in activities in or affecting commerce as defined in Section 4 of the FTC Act, 15 U.S.C. § 44, and Section 1 of the Clayton Act, 15 U.S.C. § 12. (JX0001 (Joint Stipulations of Law and Fact at 001 ¶¶ 4, 7)).

B. The Parties

1. Altria

4. Altria is a holding company incorporated in Virginia. It is the parent company of multiple tobacco companies, including Philip Morris USA Inc. ("PM USA"), which "is engaged in the manufacture and sale of cigarettes in the United States [of America ('United States' or 'U.S.')]." (JX0001 (Joint Stipulations of Law and Fact at 001 ¶ 3); PX9017 (Altria) at 004).

5. Altria's subsidiary PM USA is the largest United States cigarette company. (PX9017 (Altria's Form 10-K) at 005; PX8011 (Eldridge (ITG) Decl. at 006 ¶ 28)).

6. Altria wholly owns U.S. Smokeless Tobacco Company LLC ("USSTC"). USSTC is the leading producer and marketer of moist smokeless tobacco ("MST") products. The smokeless products segment of the MST market includes the premium brands, Copenhagen and Skoal, and value brands, Red Seal and Husky. (PX9017 (Altria) at 004, 005).

7. Altria's operating subsidiaries are primarily engaged in the manufacture and sale of tobacco products in the United States. (JX0001 (Joint Stipulations of Law and Fact at 001 ¶ 3)).

8. From 2012 to 2018, Altria had an active operating company called Nu Mark LLC ("Nu Mark"), which sold what Altria refers to as "innovative tobacco products," including electronic cigarettes ("e-cigarettes"), in the United States. (Murillo (Altria/JLI) Tr. 2898; PX9017 (Altria) at 004-05; Schwartz (Altria) Tr. 1850; Quigley (Altria) Tr. 1995).

9. Prior to December 2018, Altria participated in the e-vapor category of the tobacco market and developed and commercialized innovative tobacco products through its operating subsidiary Nu Mark. (PX9017 (Altria) at 005 (Altria FY2018 10-K)).

2. JLI

10. JLI manufactures and sells an e-cigarette, referred to as "JUUL" or "Juul", which heats a nicotine-based liquid into an aerosol to deliver nicotine to users. (PX2218 (JLI) at 003 (HSR Notification Form); PX9017 (Altria) at 004).

11. JUUL is a closed system pod-based product ("pod" or "pod product") that was first introduced in 2015. (PX0017 (Altria) at 003).

12. In 2018, JUUL was the best-selling e-cigarette in the United States. (Pritzker (JLI) Tr. 729; PX2098 (JLI) at 001, 014; PX9017 (Altria) at 058; *see also* Huckabee (Reynolds) Tr. 442-43; PX1316 (Altria) at 007; PX3228 (Reynolds) at 006; PX1115 (Altria) at 003).

C. The Transaction

13. On December 20, 2018, Altria and JLI entered into a transaction (the "Transaction"), whereby, among other things, Altria invested $12.8 billion dollars in JLI in exchange for a 35 percent economic interest in JLI. (RX1001 (Altria) at 001; PX9081 (Altria) at 001; *see also* PX2141 (JLI) (Purchase Agreement)). Pursuant to the Transaction, Altria obtained the right to appoint one-third of JLI's directors upon antitrust clearance of the Transaction. The Transaction also imposed some restrictions on JLI's sale rights, and imposed some restrictions preventing Altria from acquiring control of JLI. (RX1001 (Altria) at 001; PX2216 (JLI) at 004-05, 052; PX1276 (JLI) at 029-32, 041).

14. The Transaction included a number of related documents, including a "Purchase Agreement," a "Relationship Agreement," a "Services Agreement," and a "Voting Agreement." (PX2141 (JLI) (Purchase Agreement); PX1276 (JLI) (Relationship Agreement); PX1275 (JLI) (Services Agreement); PX2216 (JLI) (Voting Agreement) (collectively, "Transaction Documents")).

D. E-Cigarette Industry

1. Background

15. An e-cigarette is an electronic device that aerosolizes nicotine-containing liquid ("e-liquid"). (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 10)).

16. The terms "e-cigarettes" and "e-vapor" can be used interchangeably. (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 11); Farrell (NJOY) Tr. 207). E-cigarettes and e-vapor products can also be referred to as vapor products. (Farrell (NJOY) Tr. 207; (Huckabee (Reynolds) Tr. 384).

17. Electronic nicotine delivery systems is abbreviated as ("ENDS"). ENDS is a term the United States Food and Drug and Administration ("FDA") uses to refer to "all e-vapor products." (Willard (Altria) Tr. 1361; Murillo (Altria/JLI) Tr. 2908-09).

18. E-cigarettes generally work as follows: When a consumer puffs on the device to inhale, the air flow passes over a puff sensor, "which tells the sensor to communicate with the battery to release a charge. Upon releasing that charge, that charge goes through the coil, heats the coil, the coil is saturated in e-liquid, and it vaporizes, atomizes the e-liquid, and the adult consumer proceeds to inhale." (Schwartz (Altria) Tr. 1852-53).

2. Rise of E-Cigarettes

19. Following the introduction of e-vapor products in the United States in the late 2000s,

"[t]he category grew rapidly starting in 2011 as more convenience stores and tobacco shops began carrying the products." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 6); Schwartz (Altria) Tr. 1859; PX2531 (JLI) at 034).

20. In 2013, large tobacco companies, such as R.J. Reynolds Tobacco Company ("Reynolds") and Altria, began acquiring and scaling up e-cigarette brands, fueling further growth. (PX2531 (JLI) at 013, 034; *see also* Jupe (Altria) Tr. 2226; PX7010 (Gifford (Altria) IHT at 145-46)).

21. Prior to 2017, demand for traditional cigarettes had decreased at a rate of around 2 to 4 percent annually. (PX5000 (Rothman Expert Report at 044 ¶ 94) (analyzing data from documents, including Altria Board of Directors presentation, May 2018, PX1229 (Altria) at 003 and 007); *see* Willard (Altria) Tr. 1324-25 (stating that Altria's top-selling combustible cigarette was declining in volume); PX7004 (Willard (Altria) IHT at 41-45) (estimating 3 to 4 percent annual decline in the volume of cigarette sales up until 2017 or 2018, and a 5.5 percent decline in the first nine months of 2019)).

22. In late 2017, the e-cigarette category of the tobacco market experienced rapid growth. (PX1316 (Altria) at 005 ("E-vapor category growth has accelerated"); PX1424 (Altria) at 003-06, 010-11; PX1229 (Altria) at 007).

23. In 2018, e-cigarette sales were "growing rapidly" while the decline in sales of traditional cigarettes was "noticeably increasing." (PX7023 (Fernandez (Altria) Dep. at 59-60); PX7021 (Pritzker (JLI) Dep. at 48-49)).

24. The rapid growth in e-cigarettes in 2017 and 2018 was driven almost entirely by JLI's e-cigarette product, JUUL. (Willard (Altria) Tr. 1106 ("[A]s a category, it was growing faster than you had anticipated, and specifically what was driving that was pod-based products."); Schwartz (Altria) Tr. 1866 ("The pod business was growing exponentially, driven by JUUL."); PX1424 (Altria) at 010-011; PX1041 (Altria) at 007; PX1229 (Altria) at 004-005, 007, 012; PX2168 (JLI) at 006; PX4029 (Altria) at 016; PX3228 (Reynolds) at 003, 006).

25. In 2018, JLI's share of the e-cigarette market grew and sales exceeded $1 billion. (PX2142 (JLI) at 006). JLI's JUUL, a pod-based product, was the best-selling e-cigarette in the United States. (Pritzker (JLI) Tr. 728-30).

26. As JLI's sales increased, traditional cigarette sales continued to decline. (Pritzker (JLI) Tr. 782-83; PX7021 (Pritzker (JLI) Dep. at 48-49) ("[T]he decline in cigarette revenues in the United States was increasing, noticeably increasing."); Willard (Altria) Tr. 1145-47; PX2098 (JLI) at 017; PX2168 (JLI) at 006; PX1229 (Altria) at 010). The rate of decline in traditional cigarette volumes increased to around 5 to 6 percent in 2019. (PX8011 (Eldridge (ITG) Decl. at 002 ¶ 7)).

27. Traditional tobacco companies invested heavily in e-cigarettes and other next-generation tobacco products as "the key driver of future growth." (PX1166 (Altria) at 006; *see also*

PX1166 (Altria) at 009 ("Vapor will be the largest category and has considerable margin opportunity."); PX1172 (Altria) at 007 (Willard interview with the Wall Street Journal dated March 23, 2019)).

3. Types of E-Cigarettes

a. Closed System E-Cigarettes

28. There are two main types of e-cigarettes: closed system e-cigarettes and open-tank e-cigarettes. (*See* F. 29-43).

29. Closed system e-cigarettes, also called closed systems, are comprised of a battery and a container that comes prefilled with liquid that contains nicotine. (Farrell (NJOY) Tr. 207, 209-10; Schwartz (Altria) Tr. 1851-52).

30. Closed system e-cigarettes include cig-a-likes (F. 31-33) and pod-based products (F. 34-35). (Huckabee (Reynolds) Tr. 384-85; Crozier (Sheetz) Tr. 1492-93; Begley (Altria) Tr. 969; Farrell (NJOY) Tr. 206-07, 210-11).

i. Cig-a-likes

31. A cig-a-like is narrow and tubular in shape, "similar to a traditional cigarette." (Huckabee (Reynolds) Tr. 385; Farrell (NJOY) Tr. 210-11, 213-14 (a cig-a-like is "generally longer than it is wide, and reminds someone of a combustible cigarette"); Jupe (Altria) Tr. 2136 ("[Cig-a-likes are] supposed to emulate the look of the cigarette); Gifford (Altria) Tr. 2721-22; PX4029 (Altria) at 007).

32. Some cig-a-likes are disposable and "designed for one time use." (Farrell (NJOY) Tr. 212-14, 285, 290, 361; Crozier (Sheetz) Tr. 1491; PX9101 at 004; PX7026 (Gardner (Altria) Dep. at 48-49); PX7012 (Eldridge (ITG) Dep. at 49); PX7019 (Crozier (Sheetz) Dep. at 55-56)).

33. Some cig-a-likes have rechargeable batteries. These cig-a-likes are not considered disposable. (Farrell (NJOY) Tr. 212-15; PX9101 at 005; PX7026 (Gardner (Altria) Dep. at 48-49)).

ii. Pod-based Products

34. Pod products can vary in form. Some pod products are rectangular. Some pod products look like a USB flash drive or thumb drive. (O'Hara (JLI) Tr. 496; Begley (Altria) Tr. 1094-95; Farrell (NJOY) Tr. 210). Pod products are not tubular or similar in shape to a traditional cigarette. (Huckabee (Reynolds) Tr. 385; Farrell (NJOY) Tr. 210-11, 214).

35. Pod-based e-cigarettes are designed to be used with disposable pods or cartridges that come prefilled with liquid nicotine and attach to the device. (Crozier (Sheetz) Tr. 1487-

89; King (PMI) Tr. 2346; Farrell (NJOY) Tr. 214-15; Gifford (Altria) Tr. 2721-22; PX7035 (Masoudi (JLI) Dep. at 107)).

b. Open System Devices

36. Open system devices "consist of a battery, [e-liquid] tank, [heating] coil, and atomizer." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 8); *see also* Farrell (NJOY) Tr. 207-09 (discussing components)).

37. Open system devices include "a reservoir that a user can refill with an e-liquid of their choosing." (PX9027 (FDA) at 009).

38. Open system devices have the largest batteries of the various e-vapor product types, allowing them to generate more power, which produces larger "plumes of vapor." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 8)).

39. Many open system devices allow users to adjust the energy from the device, and with it, the volume of the vapor plume. (PX7030 (Wexler (Turning Point Brands) Dep. at 33); PX7002 (Schwartz (Altria) IHT at 24-25)).

40. "As their industry name implies, open systems allow users to customize their experience by choosing variations of the liquid nicotine solutions for use in the tank. E-liquids typically consist of liquid nicotine, flavoring, and solvents. As a result, open system users can experiment with a wide variety of potential flavor combinations and nicotine strengths." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 9); *see also* Begley (Altria) Tr. 969-70 (explaining that open systems allow users to adjust the device settings and e-liquids)).

41. In addition, "users can customize the individual components of an open system, such as the battery, coil, and atomizer." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 9)). As a result, "there's almost infinite variety in open systems." (PX7030 (Wexler (Turning Point Brands) Dep. at 100); *see also* Farrell (NJOY) Tr. 208 (explaining that users can swap out the various parts)).

42. "Many open system users view customizing these products as a hobby." (PX8003 (Wexler (Turning Point Brands) Decl. at 002 ¶ 9); *see also* Huckabee (Reynolds) Tr. 387). That is because the products are more "complex" and generally require maintenance and cleaning. (Farrell (NJOY) Tr. 207-09).

43. Open system devices are typically sold in vape shops. (Huckabee (Reynolds) Tr. 386-87; Farrell (NJOY) Tr. 208; Begley (Altria) Tr. 972-73; Gifford (Altria) Tr. 2756; PX4029 (Altria) at 008; Gifford (Altria) Tr. 2741; Crozier (Sheetz) Tr. 1494-95).

E. Closed System E-Cigarette Industry Participants

1. Altria/Nu Mark

44. Altria established its Nu Mark operating company in 2012 with the goal of developing and marketing innovative tobacco products, including e-cigarette products, for adult tobacco consumers. (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 12)).

45. Nu Mark was the Altria operating company responsible for competing in the e-cigarette market in the United States. (Begley (Altria) Tr. 961-62; PX9017 (Altria) at 005 ("Nu Mark participated in the e-vapor category and developed and commercialized other innovative tobacco products.")).

46. Beginning in 2013, Nu Mark launched a series of internal development efforts, which were undertaken by scientists and engineers at Altria's Center for Research and Technology. (Willard (Altria) Tr. 1149, 1332-33; Jupe (Altria) Tr. 2211).

47. By 2015, Nu Mark had five projects underway to develop new e-vapor devices. Of those, two were designed to compete against cig-a-likes and two were closed system products designed to appeal to open-tank users. The remaining project was still evolving. (PX1135 (Altria) at 020, 046).

48. As early as 2016, Altria believed that e-cigarettes represented a "significant longer-term opportunity." (PX7022 (Begley (Altria) Dep. at 92-94); PX4040 (Altria) at 018 ("Nu Mark 2016-2018 Strategic Plan") ("E-Vapor Category Represents a Significant Longer-Term Opportunity"); PX7023 (Fernandez (Altria) Dep. at 181-82)).

49. Altria put substantial resources into Nu Mark and "spent well over half a billion dollars, maybe up to a billion dollars, investing in the e-vapor category." (Willard (Altria) Tr. 1341).

50. Altria found that development for electronic products like e-cigarettes required "an entirely different construct" than what was required for conventional tobacco products such as cigarettes. (PX7024 (Crosthwaite (Altria/JLI) Dep. at 267-68)). It required "engineering skills, [and] software skills." (PX7006 (Crosthwaite (Altria/JLI) IHT at 106)). Altria found it was "much harder" to develop innovative electronic products "than it is to maintain and line extend products that are in the combustible cigarette business." (PX7031 (Willard (Altria) Dep. at 261-62)).

51. Brian Quigley, who was President and Chief Executive Officer ("CEO") of Nu Mark in 2018, believed that Altria and Nu Mark were not "structured appropriately" to develop innovative products, explaining that Altria always "approached product development like a cigarette company" and "needed to think more like a technology company and have different capabilities and different processes." (Quigley (Altria) Tr. 2024-25).

52. Although Nu Mark had pursued at least a half dozen internal projects to develop e-vapor

products, many of which were the subject of "years" of effort, Nu Mark never succeeded in developing from scratch its own e-vapor product. (Murillo (Altria/JLI) Tr. 2940-41; *see also* PX7041 (Quigley (Altria) Dep. at 148-49); PX7018 (Schwartz (Altria) Dep. at 163-64)).

53. In addition to trying to develop an e-vapor product internally, Altria sought to acquire existing e-vapor products. (Willard (Altria) Tr. 1343-44).

54. Every product that Nu Mark launched into the marketplace was a result of an external acquisition, licensing arrangement, or partnership with another e-vapor company. (PX7018 (Schwartz (Altria) Dep. at 163-64); *see also* Garnick (Altria) Tr. 1742-43; PX7017 (Magness (Altria) Dep. at 287-88)).

55. Until October 25, 2018, Nu Mark sold MarkTen Elite pod-based products and Apex pod-based products. (PX9114 (Altria) at 002; PX4029 (Altria) at 021; PX0015 (Altria) at 007-09).

56. Until December 2018, Nu Mark sold MarkTen cig-a-likes and Green Smoke cig-a-likes. (PX9114 (Altria) at 002; PX4029 (Altria) at 021; PX0015 (Altria) at 007-09).

a. Cig-a-likes

i. MarkTen Brand

57. In 2013, Nu Mark introduced its first e-vapor product, a cig-a-like called MarkTen King Size. (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 13); PX7007 (Murillo (Altria/JLI) IHT at 126); Gifford (Altria) Tr. 2734). That product was acquired from a Chinese contract manufacturer named Kimree. (PX7018 (Schwartz (Altria) Dep. at 163-64)). The MarkTen King size came in two nicotine strengths: 1.5 percent nicotine and 2.5 percent nicotine. (RX0175 (Altria) at 003).

58. By mid-2015, Nu Mark found that neither the 1.5 percent nor the 2.5 percent nicotine products were "competitive . . . or satisfying enough to drive conversion from a traditional cigarette or most other e-vapor products." (RX0175 (Altria) at 003). Altria concluded that MarkTen King Size would not "drive conversion and sustainable volume[,] and risk[ed] damaging the credibility of the brand[.]" Altria abandoned the product in favor of MarkTen XL (*see* F. 61). (RX0175 (Altria) at 003; *see also* PX7002 (Schwartz (Altria) IHT at 81-82) (explaining that MarkTen King Size "proved to be less than successful")).

59. In April 2014, Nu Mark acquired the e-vapor business of an Israeli company named Green Smoke, Inc. (Willard (Altria) Tr. 1460; Schwartz (Altria) Tr. 1864).

60. Nu Mark incorporated Green Smoke's technology into a new iteration of the MarkTen brand, the "MarkTen XL," which also was a cig-a-like. (Willard (Altria) Tr. 1345; Gifford (Altria) Tr. 2734; *see also* PX7002 (Schwartz (Altria) IHT at 35) (explaining that

MarkTen XL "was a former Green Smoke product that [Altria] reskinned into a Mark Ten presentation"); RX0746 (Altria) at 028 ("Green Smoke product portfolio overlaps with MarkTen portfolio")).

61. MarkTen XL was a larger version of MarkTen. (PX7034 (Mountjoy (Altria) Dep. at 57)). MarkTen XL had several varieties, including MarkTen Bold. (PX7015 (Gogova (Altria) Dep. at 30)).

62. MarkTen Bold was a cig-a-like product that had higher levels of nicotine than MarkTen and included nicotine salts.[39] (Begley (Altria) Tr. 980-81; PX9047 (Altria) at 009).

63. Cig-a-likes sold under the MarkTen brand included MarkTen Bold, MarkTen XL, and MarkTen. (O'Hara (JLI) Tr. 506; PX9114 (Altria) at 009, 012).

ii. Green Smoke

64. After the launch of Mark Ten XL, Nu Mark kept the Green Smoke brand in the market. (PX4040 (Altria) at 038).

65. Altria sold the Green Smoke cig-a-like primarily through commercial transactions conducted electronically on the internet (e-commerce). (PX9080 (Altria) at 001; PX9114 (Altria) at 002).

b. Pod-based Products

i. Elite

66. In February 2018, Nu Mark launched MarkTen Elite, often referred to as Elite, a pod-based closed system e-cigarette. (Jupe (Altria) Tr. 2244-45; Schwartz (Altria) Tr. 1871; Willard (Altria) Tr. 1308, 1354; Begley (Altria) Tr. 984, 990, 1059).

67. Elite had been sold on the market by another company before the August 8, 2016 Deeming Rule (F. 195). (Begley (Altria) Tr. 984; Garnick (Altria) Tr. 1690).

68. Altria acquired the right to MarkTen Elite in late 2017 from a Chinese manufacturer, Smoore Shenzhen Technology ("Smoore"). (Begley (Altria) Tr. 984-85; Jupe (Altria) Tr. 2244-45; Schwartz (Altria) Tr. 1862-64; Murillo (Altria/JLI) Tr. 2941-42; PX2084 (JLI) at 020).

69. Nu Mark also entered into a partnership with a U.S. e-vapor company (Avail) that made e-liquids for Elite. (Begley (Altria) Tr. 984-85; PX9045 at 006).

70. Nu Mark was interested in acquiring Elite because Nu Mark had started to see pod-based products gain popularity in the marketplace. (Begley (Altria) Tr. 985) ("We saw fairly rapid growth of the pod segment and we thought it was important to compete.").

[39] Nicotine salts are discussed in section III.J.4. *infra*.

71. Nu Mark "was hopeful" Elite would disrupt JUUL's growth when Altria launched Elite. (Begley (Altria) Tr. 990-91).

ii. Apex

72. Apex was a closed system pod-based product that was developed by Philip Morris International ("PMI").[40] (Willard (Altria) Tr. 1157-58, 1240; Schwartz (Altria) Tr. 1916; PX9114 (Altria) at 002). Apex was introduced in the United States prior to the 2016 Deeming Rule. (PX7020 (King (PMI) Dep. at 228)).

73. Altria had the rights to commercialize Apex in the United States pursuant to a joint research, development, and distribution agreement between Altria and PMI. (Begley (Altria) Tr. 983-84; Jupe (Altria) Tr. 2133; King (PMI) Tr. 2545).

74. Around August 2018, Altria was selling Apex through e-commerce. (Murillo (Altria/JLI) Tr. 3053; King (PMI) Tr. 2535; Begley (Altria) Tr. 984).

75. Apex was commercialized "in a very limited e-commerce distribution." (PX7017 Magness (Altria) Dep. at 288). It was only available for online purchase in ten states. (PX1072 (Altria) at 004).

2. JLI

76. What is now known as JLI was founded in 2007 by Adam Bowen and James Monsees, two former graduate students at Stanford University. JLI was originally incorporated as PLOOM, Inc. in 2007. It was later renamed Pax Labs, Inc. On June 30, 2017, Pax Labs renamed itself Juul Labs, Inc., and spun off certain assets and employees and other non-nicotine vaporizer products into a new company Pax Labs, Inc. (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 14)).

77. In 2015, JLI, then operating under the name Pax Labs, launched a product called JUUL. (JX0001 (Joint Stipulations of Law and Fact at 002 ¶ 15)).

78. In December 2017, sales of JUUL overtook the then category leader, Reynolds' Vuse. (Huckabee (Reynolds) Tr. 410).

79. In 2018, JLI was the best-selling e-cigarette in the United States and the "market leader." (Pritzker (JLI) Tr. 729 (discussing PX2022); PX2098 at 014 ("JUUL continues to lead the vapor category"); PX1115 (Altria) at 003 ("JUUL is the undisputed leader in the U.S. e-vapor market")).

[40] PMI is an international company that manufactures and sells various nicotine containing products, including cigarettes and heated tobacco products, as well as e-cigarettes. (King (PMI) Tr. 2337). In 2008, PMI split from its former parent, Altria, with PMI focusing on international markets and Altria focusing on the U.S. markets. (King (PMI) Tr. 2337).

3. Reynolds

80. Reynolds American, Inc. owns RJR Tobacco Company and RAI Innovations Company. RAI Innovations Company owns RJR Vapor Company. British American Tobacco owns Reynolds American, Inc. (Huckabee (Reynolds) Tr. 371-72; O'Hara (JLI) Tr. 501). This corporate group is referred to as "Reynolds." (Huckabee (Reynolds) Tr. 372).

81. Reynolds is the second-largest tobacco company in the United States after Altria. (Begley (Altria) Tr. 1120; Huckabee (Reynolds) Tr. 372).

82. Reynolds currently sells four e-cigarettes under the Vuse brand: Vuse Solo, Vuse Ciro, Vuse Vibe, and Vuse Alto. (Huckabee (Reynolds) Tr. 377). All of these products are closed system e-cigarettes. (Huckabee (Reynolds) Tr. 381-82).

83. Vuse Solo was launched in 2011 and was the first Vuse e-cigarette sold by Reynolds. Vuse Solo was developed by Reynolds. (Huckabee (Reynolds) Tr. 444-45).

84. Vuse Solo, Vuse Vibe, and Vuse Ciro are cig-a-likes. (O'Hara (JLI) Tr. 502; Huckabee (Reynolds) Tr. 378, 441).

85. Vuse was the leading e-cigarette brand in the United States from 2016 to 2017 until JUUL overtook Vuse in December 2017. (Huckabee (Reynolds) Tr. 409-10; PX1280 (Altria) at 009-10).

86. In August 2018, Reynolds launched Vuse Alto, a pod product. (Huckabee (Reynolds) Tr. 378-79, 395).

87. Vuse Alto is offered in three nicotine strengths: 1.8%, 2.4%, and 5%. Reynolds offers different nicotine strengths because different consumers prefer different nicotine strengths. (Huckabee (Reynolds) Tr. 395).

4. ITG

88. ITG Brands ("ITG") is the third-largest tobacco company in the United States. (PX8011 (Eldridge (ITG) Decl. at 001 ¶ 2); PX8010 (Folmar (ITG) Decl. at 001 ¶ 2)).

89. ITG is a subsidiary of British-based tobacco company Imperial Brands PLC. (PX8011 (Eldridge (ITG) Decl. at 001 ¶ 3); PX8010 (Folmar (ITG) Decl. at 001 ¶ 1)).

90. Fontem U.S. LLC ("Fontem US") is a subsidiary of Imperial Brands. (PX7012 (Eldridge (ITG) Dep. at 32-33); PX8011 (Eldridge (ITG) Decl. at 001 ¶ 4)). Fontem US is focused on next-generation nicotine products, and its primary product is the blu brand of e-cigarettes. (PX3025 (ITG) at 004). ITG is the sales agent for Fontem US. (PX7012 (Eldridge (ITG) Dep. at 32-33)).

91. ITG sells e-cigarettes under the brand name blu. (PX8011 (Eldridge (ITG) Decl. at 004-05 ¶ 19); PX8010 (Folmar (ITG) Decl. at 001 ¶ 2)). Blu is a closed system product line. (Begley (Altria) Tr. 976).

92. ITG sells three types of closed system products: *my*blu pod device; the blu Plus+ cig-a-like; and the single-use blu Disposable, which is a cig-a-like. (PX7012 (Eldridge (ITG) Dep. at 49-50); PX8011 (Eldridge (ITG) Decl. at 004-05 ¶ 19); PX8010 (Folmar (ITG) Decl. at 001 ¶ 2)).

93. ITG introduced the *my*blu pod device in 2017. (PX8011 (Eldridge (ITG) Decl. at 004-05 ¶ 19)).

94. Imperial Brands acquired its blu e-cigarette brand in 2015. (PX8011 (Eldridge (ITG) Decl. at 001 ¶ 3)).

5. JTI

95. Japan Tobacco Inc. ("JTI") is a tobacco company that sells the Logic e-cigarette brand. (Begley (Altria) Tr. 977; Crozier (Sheetz) Tr. 1489; Farrell (NJOY) Tr. 272).

96. Logic is a line of closed system e-cigarettes. (Crozier (Sheetz) Tr. 1488-89; Begley (Altria) 977).

97. The Logic brand includes several products, including Logic Pro and Logic Power (Crozier (Sheetz) Tr. 1489; PX2597 (JLI) at 040). Logic also sells a pod-based product called Logic Compact. (PX2084 (Altria) at 020; O'Hara (JLI) Tr. 575-76).

98. Logic Compact is manufactured by Smoore. (PX2084 (Altria) at 020; O'Hara (JLI) Tr. 575-76).

6. NJOY

99. NJOY, LLC ("NJOY") is a privately held manufacturer of e-cigarettes. (Farrell (NJOY) Tr. 200).

100. NJOY is not affiliated with a traditional tobacco firm. (Farrell (NJOY) Tr. 326; O'Hara (JLI) Tr. 505).

101. NJOY currently sells a closed system pod product with a rechargeable battery called the NJOY Ace, and a closed system disposable cig-a-like called the NJOY Daily. (Farrell (NJOY) Tr. 206, 214; PX3216 (NJOY) at 003-04).

102. NJOY Ace was launched in October or November 2018. (Farrell (NJOY) Tr. 336).

103. In 2018, NJOY also sold three cig-a-likes: Loop, PFT, and King. (Farrell (NJOY) Tr. 206-07).

104. NJOY Ace is manufactured by Smoore. (O'Hara (JLI) Tr. 577; PX3195 (NJOY) at 10).

F. The Relevant Market

1. Relevant Product Market

105. The relevant product market in this case is the closed system e-cigarettes market that includes both cig-a-likes and pod-based products. (F. 106-170).

a. Distinction between Closed System and Open System Products

106. Closed system e-cigarettes or closed systems consist of a battery and a container that comes prefilled with liquid containing nicotine. The cartridges (also referred to as pods) are not meant to be refilled by users and the consumer cannot adjust the performance of a closed system device. Closed system e-cigarettes are sold primarily through conventional convenience stores, supermarkets, and other outlets where cigarettes are sold. (F. 107, 113-114, 122, 132).

107. Closed system e-cigarettes offer an "appealing" combination of factors to consumers in that it is a "convenient product that is also typically very discreet in nature, meaning its vapor cloud is relatively low[.]" (Huckabee (Reynolds) Tr. 385-86).

108. Open system devices consist of a battery, an e-liquid tank, a heating coil, and an atomizer. The devices may be refilled by users and users can adjust the energy from the device, the volume of the vapor plume, the flavor combinations and the nicotine strengths. Open system devices are typically sold in vape shops. (F. 36-43).

109. "MOC" stands for "multi-outlet convenience" and refers to the sales channel that includes "conventional convenience stores, supermarkets, and various other outlets where cigarettes are sold." (Begley (Altria) Tr. 1090).

110. Altria views closed system e-cigarettes as a distinct market from open system products, tracking its share in the MOC channel. (Begley (Altria) Tr. 973; *see, e.g.*, PX1280 (Altria) at 010 (Altria Board update); PX1087 (Altria) at 004 (MarkTen weekly share report); PX1703 (Altria) at 043-44 (Nu Mark business update); PX1284 (Altria) at 016).

111. JLI views closed system e-cigarettes as a distinct market from open system products. (PX2145 (JLI) at 023 (slide from draft credit investor presentation from November 2018, titled "U.S. competition overview" showing sales for Vuse, Juul, MarkTen XL Bold, Elite, Logic Power, Blu Plus, and *my*blu, which are all closed system e-cigarette products); PX2062 (JLI) at 007 (sales and marketing slide presentation tracking the performance of MarkTen, Vuse, Blu, Logic, and NJOY, all of which are closed system products)).

112. Reynolds, ITG, and NJOY, manufacturers of closed system e-cigarettes, view closed

system e-cigarettes as a distinct market from open system products. (PX8008 (Huckabee (Reynolds) Decl. at 021 ¶ 41); PX7012 (Eldridge (ITG) Dep. at 170); Farrell (NJOY) Tr. 225).

b. Product Features, Consumers, and Vendors

113. Both cig-a-likes and pod-based products have pods or cartridges that are prefilled with nicotine liquids. The pods or cartridges are not meant to be refilled by users. (Huckabee (Reynolds) Tr. 384; Farrell (NJOY) Tr. 207, 210; King (PMI) Tr. 2341-42; PX7035 (Masoudi (JLI) Dep. at 107); PX7022 (Begley (Altria) Dep. at 74)). The user lacks the ability to adjust the performance of a closed system device. (Begley (Altria) Tr. 970; PX7022 (Begley (Altria) Dep. at 74-76); PX7002 (Schwartz (Altria) IHT at 28)).

114. Cig-a-likes and pod-based e-cigarettes can be sold as a kit including the battery and the prefilled pod or cartridge, or as separate components. (Farrell (NJOY) Tr. 214-15; PX7009 (Burns (JLI) IHT 022-23)).

115. Cig-a-likes and pod-based e-cigarettes may or may not contain nicotine salts. (O'Hara (JLI) Tr. 503-05; PX4015 (Altria) at 012; PX4115 (Altria) at 010; PX3005 (ITG) at 008, 022-23; PX7012 (Eldridge (ITG) Dep. at 168); PX1166 (Altria) at 021).

116. Cig-a-likes and pod-based e-cigarettes can have an array of different nicotine strengths. (Begley (Altria) Tr. 982 (discussing PX9000 (Altria) at 017); Huckabee (Reynolds) Tr. 395; Farrell (NJOY) Tr. 228-29, 341-42; Gardner (Altria) Tr. 2673-75; PX7025 (Burns (JLI) Dep. at 45-46); PX4115 (Altria) at 010; PX4014 (Altria) at 030).

117. Cig-a-likes and pod-based products can come in a variety of options in terms of flavors. (Huckabee (Reynolds) Tr. 441 (noting that Reynolds' pod-based e-cigarette (Vuse Alto) and cig-a-like products (Vuse Ciro, Solo, and Vibe) are each offered in various flavors); Farrell (NJOY) Tr. 342-43 (describing nicotine strength and flavor options for NJOY's cig-a-like product, the Daily)).

118. Generally, pod-based products are larger than cig-a-likes, (Willard (Altria) Tr. 1348), which means they can use larger batteries. (King (PMI) Tr. 2353-54 (explaining that the larger the device, the higher capacity of the battery)).

119. Battery power influences "the amount of vapor that is produced in a puff." (Farrell (NJOY) Tr. 292; *see also* Huckabee (Reynolds) Tr. 449-50).

120. Pods have "larger," "more effective batteries" compared to cig-a-likes, which makes them "more effective at taking the liquid and turning it into vapor . . . ." (PX7030 (Wexler (Turning Point Brands) Dep. at 42)).

121. The Vuse Vibe, a cig-a-like, "has the largest capacity cartridge and the longest-lasting battery of the VUSE product line." (PX8008 (Huckabee (Reynolds) Decl. at 007-09 ¶ 18(c)); Huckabee (Reynolds) Tr. 378).

122. Closed system products come in different shapes, referred to as "form factors." (Farrell (NJOY) Tr. 210-11).

123. A cig-a-like is "an e-vapor product that looks like a cigarette. It's white, it's cylindrical, and, frankly, it's more similar in size to a cigarette than these more recently introduced pod-based products." (Willard (Altria) Tr. 1352; Farrell (NJOY) Tr. 365 (Because "cigalikes as a whole . . . try to mimic the appearance and the shape and the feel of combustible cigarettes[,]" an "adult smoker that wants to try them as an alternative [will] see[] some similarities [with] what they were using previously.")).

124. Altria's MarkTen and MarkTen Bold, both cig-a-likes, had a narrow and tubular shape and looked similar to a cigarette. (Huckabee (Reynolds) Tr. 385; Farrell (NJOY) Tr. 210-211, 213-214; PX4029 (Altria) at 007; PX7026 (Gardner (Altria) Dep. at 48)).

125. Pod products are "not tubular or similar to a traditional cigarette." They are "larger" and "more rectangular in nature." (Huckabee (Reynolds) Tr. 385).

126. Altria's MarkTen Elite, a pod-based product, "was a sort of smashed diamond shape." (PX7026 (Gardner (Altria) Dep. at 210-11)).

127. The Juul devices are shaped like a USB flash drive or thumb drive. (Crozier (Sheetz) Tr. 1555-56; Farrell (NJOY) Tr. 210-11; Begley (Altria) Tr. 1094-95).

128. The difference in shape between cig-a-likes and pods "is far more than just an aesthetic issue." (Begley (Altria) Tr. 1079).

129. Cig-a-likes' resemblance to a traditional cigarette means that this form "carrie[s] some of the stigmas of smoking a cigarette[.]" (Begley (Altria) Tr. 1099-1100). Many "smokers who want[] to convert to non-combustible tobacco products d[o] not want to appear to be smoking a cigarette[.]" (PX7036 (Garnick (Altria) Dep. at 134-35)).

130. Cig-a-like consumers are "generally an older consumer who is not worried about the social friction of cigarettes, and so they want a product that looks and feels and performs similar to their cigarette product." (Myers (Altria) Tr. 3350; *see also* PX7000 (Garnick (Altria) IHT at 108) ("I think our traditional cig-a-like[s] were generally used more by the older cohorts, I'm not sure what the age group was, but the older cohorts than the pod products.")).

131. Pods are "used more by the younger adult cohorts." (PX7000 (Garnick (Altria) IHT at 108)). That demographic "wanted something that looked different" than a cigarette. (Myers (Altria) Tr. 3350; PX7030 (Wexler (Turning Point Brands) Dep. at 51) ("Pod systems [users] are significantly younger in our particular database. They'd be – 30 and under somewhere is around the average.")).

132. Cig-a-like and pod-based products are sold primarily through the MOC channel. (Begley (Altria) Tr. 971-72 (acknowledging that the MOC channel is the major sales channel for

the sale of closed system e-vapor products); Huckabee (Reynolds) Tr. 387 (testifying that Reynolds "sell[s] the vast majority of our closed-system products in traditional retail channels, convenience stores being the biggest percentage by far"); Farrell (NJOY) Tr. 220-21 ("NJOY has focused its attention on convenience and gas stores, so a convenience market."); PX8008 (Huckabee (Reynolds) Decl. at 006 ¶ 14); PX8004 (Farrell (NJOY) Decl. at 002 ¶ 11)).

133. Cig-a-likes and pod-based products "compete for . . . the same customers, adult smokers and adult vapers who frequent" convenience stores. (Farrell (NJOY) Tr. 291). Reynolds regards its "competitive set as all products that are sold and available in our channels. So products that compete for consumer purchase, very primarily in the convenience store channel, . . . these are almost without exception closed-system products . . . [including] [p]ods and cigalike products." (Huckabee (Reynolds) Tr. 388-89).

134. Nu Mark's 2018 three-year strategic plan included a plan for future merchandising shelf space showing both its pod-based Elite and its MarkTen cig-a-likes displayed on adjacent shelves. (PX4012 (Altria) at 40).

135. The majority of retailers who sell NJOY's e-cigarette products sell both NJOY's pod-based product, Ace, and its cig-a-like product, Daily. At a majority of those retailers, both products are displayed next to each other on shelves. (Farrell (NJOY) Tr. 257-58).

136. NJOY uses the same distributors for both its pod-based product Ace and its cig-a-like product Daily. (Farrell (NJOY) Tr. 257-58).

c. Market Participants' Views of Competition

i. JLI

137. JLI's pricing strategy in 2017 included comparing prices for its JUUL pod e-cigarette to a number of e-vapor products, including cig-a-like products MarkTen XL, Vuse Solo, and Blu Plus. (PX2579 (JLI) at 007) (listing specific products used for comparison); PX2333 (JLI) at 005-08 (summarizing Nielsen data and comparing JUUL to MarkTen, Vuse, Blu, and Logic across a range of metrics, including device pricing, device units, refill pricing, and refill dollars)).

138. In May 2017, JLI commissioned a pricing survey by a consulting firm, McKinsey & Company ("McKinsey"). The pricing survey noted that "[c]losed-system vaporizers, sometimes known as cigalikes and e-cigs . . . include disposable e-cigarettes or e-cigarettes that use replaceable cartridges or pods." (PX2579 (JLI) at 181). A McKinsey slide deck on pricing strategy prepared for JLI includes a slide comparing prices for a number of e-vapor products, including JUUL's pod product and cig-a-like products MarkTen XL, Vuse Solo, and Blu Plus. (PX2579 (JLI) at 007).

139. JLI tracked starter kit unit shares over time for competitors, including Vuse and MarkTen. (PX2588 (JLI) at 003, 017) (September 2017 Board update containing a

"Competitive Analysis" slide on brand marketing including Vuse, Blu, Logic, MarkTen, and IQOS).

140. JLI reported on market shares from October 2017 and January 2018, before MarkTen Elite and Vuse Alto were introduced, for MarkTen, Vuse, Blu, Logic, and Juul. (PX2488 (JLI) at 002; PX2487 (JLI) at 001; PX2483 (JLI) at 002).

141. JLI, in a business overview from December 2017, stated: "JUUL competes within an ecosystem with a range of vaporizer products," and identified its competitors as including Blu, MarkTen, and Vuse. (PX2597 (JLI) at 037, 039).

142. In numerous confidential information memoranda from 2018, JLI compared its Juul product with both MarkTen and Elite, as well as Vuse, Blu, Logic, and NJOY, in terms of nicotine satisfaction and user experience. (PX2590 (JLI) at 029; PX2158 (JLI) at 047; PX2531 (JLI) at 033).

143. JLI, in an April 2018 competitor benchmarking presentation, compared flavor and nicotine attributes of closed system products, including cig-a-like products such as MarkTen, Vuse Solo, and Blu Plus. (PX2344 (JLI) at 004, 007).

144. In a 2018 first quarter investor update, JLI compared JUUL's change in share at retail from April 2017 to April 2018, before Alto was introduced, to those of Vuse, Blu, MarkTen, and Logic. (PX2345 (JLI) at 004).

145. In a May 2018 JLI slide presentation titled "Flavor Competitive Landscape," JLI compared JUUL's flavor offerings to those of "top competitors," including both Elite and MarkTen, as well as cig-a-likes Vuse Solo, Vuse Ciro, and Blu Plus. (PX2090 (JLI) at 009).

146. JLI commissioned a McKinsey study in May 2018 that compared the price elasticity of JUUL's devices and consumables with the price elasticity of other closed system products, including the MarkTen cig-a-like. (PX2252 (JLI) at 012, 048-49).

147. JLI commissioned a McKinsey study in June 2018 that calculated detailed product-level price elasticities, comparing pricing for various closed system products, including JUUL, Blu, Vuse, and cig-a-like MarkTen XL. (PX2486 (JLI) at 013, 042-43).

148. In a JLI sales and marketing slide deck from November 2018, JLI compared market shares from October 2017 to November 2018 of Juul, Vuse, Blu, MarkTen, Logic, and NJOY, and included both Altria's Elite and cig-a-like products. (PX2062 (JLI) at 007; Robbins (JLI) Tr. 3245-46).

149. In an investor presentation from November 2018, JLI tracked "competitive [product] launches," including cig-a-like products MarkTen Bold, Vuse Ciro, and Blu Plus. (PX2532 (JLI) at 016; PX7042 (Danaher (JLI) Dep. at 42-43)).

150. In his competitive intelligence role at JLI, Joseph O'Hara tracked the MarkTen cig-a-like products, including MarkTen, MarkTen XL, and MarkTen Bold. (O'Hara (JLI) Tr. 506-07; PX7033 (O'Hara (JLI) Dep. at 13, 48-49)).

151. JLI did not "change its pricing" or "its promotions" of JUUL, a pod-based product, "as a result of cig-a-like competition." (Robbins (JLI) Tr. 3245; *see also* Robbins (JLI) Tr. 3248 (stating that JLI never made any pricing decisions as a result of MarkTen Bold)).

ii. Altria

152. Altria categorized e-vapor products, including both cig-a-likes and pod-based products, as reduced-risk products. (PX7041 (Quigley (Altria) Dep. at 127)).

153. Nu Mark viewed all vapor products in closed systems as competitors. (PX7014 (Baculis (Altria) Dep. at 75) ("[A]ll of the vapor products in closed systems sold in MOC were part of the competitive set for Nu Mark."); PX7026 (Gardner (Altria) Dep. at 65-66) ("Everyone that sold [an] e-vapor product was a competitor to Nu Mark.")).

154. The market share figures that Altria presented to its Board of Directors in February 2017, before MarkTen Elite or Vuse Alto were introduced on the market, included JUUL's pod-based products and Vuse and MarkTen cig-a-likes. (RX0746 (Altria) at 014).

155. In an August 2017 update to the Altria Board, Nu Mark's slide presentation included a slide showing MarkTen's weekly market share performance as compared to Vuse, Juul, Blu, and Logic. (PX4028 (Altria) at 011). These market share figures take into account both cig-a-like and pod products. (Begley (Altria) Tr. 976). The update also presents retail volume share by brand, including Vuse Vibe, Vuse Solo, MarkTen XL, MarkTen KS, NJOY, Blu, Vapin Plus, Logic, and Juul. (PX4028 (Altria) at 012).

156. Nu Mark's 2018 three-year strategic plan from February 2018, before Vuse Alto was introduced on the market, includes a slide showing 2017 market shares for Vuse, MarkTen, Juul, Logic, and Blu. (PX4012 (Altria) 012).

157. In a February 2018 draft of its 2018-2020 three-year strategic plan, Nu Mark compared the pricing for its Elite product against both pod-based products (JUUL) and cig-a-likes (Vuse Solo and MarkTen cig-a-like). (PX1298 (Altria) at 030).

158. In a Board presentation from April 2018, before Vuse Alto was introduced, Nu Mark presented a slide showing top e-vapor brands from 2017 by share position in the MOC channel, including Vuse, MarkTen, Juul, Logic, and Blu. (PX4029 (Altria) at 013).

iii. Other Market Participants

159. Reynolds considers the competitive set for its Vuse cig-a-like products as including both "[p]ods and cigalike products" primarily in the convenience store channel. (Huckabee (Reynolds) Tr. 388).

160. Reynolds considers its Vuse pod-based products as competing with "the other pod-based and cigalike products that are on the market . . . in those same channels." (Huckabee (Reynolds) Tr. 388-89).

161. In pricing its closed system vapor products, Reynolds "take[s] into account the pricing of competitor pod-based and cigalike products, as well as promotional effectiveness in the market." (Huckabee (Reynolds) Tr. 389).

162. Reynolds typically does not discount the prices for its cig-a-like products, Ciro, Solo, and Vibe. While prices for those products have been relatively stable for some time, Reynolds is active in the pricing management of its pod product, Alto. (Huckabee (Reynolds) Tr. 389).

163. [redacted] (Huckabee (Reynolds) Tr. 419, *in camera*).

164. NJOY views cig-a-likes as competing with pod products, in that they "compete for . . . the same customers, adult smokers and adult vapers who frequent the convenience channel. They also . . . compete for limited shelf space." (Farrell (NJOY) Tr. 290-91).

165. For ITG, the biggest factor in setting prices for its pod product and in deciding what promotions to run is the price of competing pod products. (PX8011 (Eldridge (ITG Brands) Decl. at 006 ¶ 29); PX7012 (Eldridge (ITG Brands) Dep. at 130) (ITG Brands "compare[s] pods to pods.")).

166. Turning Point Brands does not consider the price of cig-a-likes when setting the price of its pod-based products. (PX7030 (Wexler (Turning Point Brands) Dep. at 50-51)).

iv. The Food and Drug Administration

167. The FDA defines a closed e-cigarette as "an e-cigarette that includes an e-liquid reservoir that is not refillable, such as a disposable cigalike, or that uses e-liquid contained in replaceable cartridges or pods that are not intended to be refillable." (PX9027 (FDA) at 009).

168. The FDA's regulation of electronic nicotine delivery systems encompasses "all e-vapor products." (Willard (Altria) Tr. 1361; Murillo (Altria/JLI) Tr. 2908-09).

169. The FDA's flavor ban that went into effect in February 2020 applies to both pod-based products and rechargeable cig-a-likes equally. (Sheetz (Crozier) Tr. 1495-96; PX9016 at 001-02 (Jan. 2020 FDA news release)).

v. The Relationship Agreement

170. The Relationship Agreement that is part of the Transaction Documents defines the "e-Vapor business" to include both cig-a-like and pod products. (PX1276 (Altria/JLI) at 009 ("'e-Vapor Business' means business activities and operations relating to vapor-based electronic nicotine delivery systems (including vaporizers and e-cigarettes that create an aerosol, vapor or other gaseous form that the user inhales) other than Heat-not-Burn Nicotine Delivery Systems")).

2. Relevant Geographic Market

171. The relevant geographic market in this case is the United States. (JX0004 (Additional Joint Stipulations of Law and Fact at 001 ¶ 1)).

G. Market Share and Concentration

1. Pre-Transaction

172. Complaint Counsel's expert witness, Dr. Dov Rothman, calculated market shares based on unit sales of closed system consumables in pods, cartridges, and disposables. (PX7048 (Rothman Trial Dep. at 25)). Dr. Rothman used STARS data, which covers shipments from wholesalers to retailers, to calculate market shares. (PX7048 (Rothman Trial Dep. at 25); *see* PX5000 (Rothman Expert Report at 108 (Ex. 3a)). Dr. Rothman also used Nielsen Syndicated Major Market data to calculate market shares. (PX5000 (Rothman Expert Report at 109, Ex. 3b)).

173. Information Resources, Inc. ("IRI") is a data compiler company that tracks retail sales of products, including e-vapor products and traditional cigarettes. (Robbins (JLI) Tr. 3243-44; Begley (Altria) Tr. 1108; Gifford (Altria) Tr. 2732-33; PX7039 (Robbins (JLI) Dep. at 28-29)). Altria and JLI utilize IRI data to project their respective market shares in the United States. (Begley (Altria) Tr. 1108; Gifford (Altria) Tr. 2732-33; Robbins (JLI) Tr. 3243). IRI projected data is an aggregated view of more than 80,000 sample stores out of a universe of more than 350,000 stores that sell tobacco products. IRI projects total retail sales based on this representative sample of stores. (RX1217 (Murphy Expert Report at 008-09 ¶ 12 n.17)).

174. Respondents' expert witness, Dr. Kevin Murphy, calculated market shares based on IRI data provided to the FTC by Altria ("IRI Projected Data") for device unit sales and cartridge unit sales by volume. (RX1217 (Murphy Expert Report at 008-09 ¶ 12 n.17, 18)).

175. Dr. Rothman measured concentration in the market for closed system e-cigarettes sold in the United States using the Herfindahl-Hirschman Index ("HHI") as described in the Horizontal Merger Guidelines. (PX7048 (Rothman Trial Dep. at 24-25); PX5000 (Rothman Expert Report at 042-43 ¶¶ 86-89); PX9098 (Horizontal Merger Guidelines) § 5.3 at 021-22).

176. To calculate the HHI and measure market concentration before the Transaction, Dr. Rothman used market shares based on units of closed system consumables, including cartridges, pods, and disposables sold by Altria, JLI, ITG, JTI, NJOY, and Reynolds in the 12-month period from October 2017 through September 2018, which was before Altria removed e-cigarette products from the market. (PX7048 (Rothman Trial Dep. at 24-26); PX5000 (Rothman Expert Report at 042 ¶ 87)).

177. Dr. Rothman calculated that Altria had a 10.1 percent market share among closed system products, as measured in the 12-month period from October 2017 to September 2018. (PX5000 (Rothman Expert Report at 043 ¶ 89, Tbl. 2)).

178. During the 12-month period that Dr. Rothman used to measure pre-Transaction HHI, the total market share of e-cigarette cartridge sales volume for cig-a-likes declined rapidly, falling from a majority (59 percent) in January 2018 to a minority (19 percent) shortly before Altria discontinued sales of MarkTen. (RX1217 (Murphy Expert Report at 062 ¶ 80)).

179. During the 12-month period that Dr. Rothman used to measure pre-Transaction HHI, in comparing cig-a-like versus pod-based device volume sales, the total market share of pod devices increased from 20 percent in October 2017 to over 50 percent by September 2018. (RX1217 (Murphy Expert Report at 028-29 ¶ 41, Fig. IV.2) (devices)).

180. By September 2018, Altria's share of the e-cigarette market was 7.5%, as measured by sales of units. (PX1127 (Altria) at 003).

181. In 2018, 90 percent of Altria's closed system cartridge unit sales were from its MarkTen cig-a-likes. (RX1217 (Murphy Expert Report at 008-09 ¶ 12) (citing IRI Projected Data); Murphy Tr. 3106-07; *see also* PX7048 (Rothman Trial Dep. at 174) (Elite never had more than one percent of the share of closed system market.)).

182. Dr. Rothman acknowledges that in November 2017, the monthly cartridge volume share for cig-a-likes was 80 percent and the monthly cartridge volume share for pod-based vaporizers was 20 percent and that "[t]wo years later, those ratios were reversed." (PX7046 (Rothman Dep. at 224)).

183. Dr. Rothman acknowledges that between 2017 and 2018, Altria's share of unit sales and revenue in the e-cigarette market went down from about 15 percent to about 8 percent. (PX7048 (Rothman Trial Dep. at 46)).

2. Post-Transaction

184. To calculate the HHI and measure market concentration after the Transaction, Dr. Rothman assumed Altria's share would be reallocated to the remaining competitors in proportion to the competitors' shares. (PX7048 (Rothman Trial Dep. at 26-27); PX5000 (Rothman Expert Report at 042 ¶ 88)). He then calculated the change in HHI as the difference between the HHI after the Transaction, as reallocated, and the HHI before the

Transaction. (PX7048 (Rothman Trial Dep. at 27); PX5000 (Rothman Expert Report at 042 ¶ 88)).

185. Dr. Murphy's analysis of sales volumes from August 2017 to August 2020, comparing all cig-a-likes, Altria cig-a-likes (Mark Ten and Green Smoke cig-a-like products) and non-Altria cig-a-likes, shows that as Altria's sales declined following the discontinuation of its cig-a-like products, sales of rival cig-a-like products increased by a nearly equal magnitude, which shows that sales lost by Altria's cig-a-likes diverted to other cig-a-likes, not to pod-based products. (RX1217 (Murphy Expert Report at 068-69, 082, 083 ¶¶ 88, 113, 115, Fig. VI.3); Murphy Tr. 3118).

186. Dr. Rothman's assumption that Altria's share would be reallocated to the remaining competitors in proportion to the competitors' shares accounts for 94 percent of his calculated increase in market concentration. (RX1217 (Murphy Expert Report at 088-89 ¶ 125 & n.220)).

187. Dr. Murphy used IRI Projected Data for cartridge volume in units and calculated that the HHI for all closed system e-vapor products decreased by nearly 500 points from October 2018 to September 2020. (RX1217 (Murphy Expert Report at 051-52 ¶ 68)).

188. Dr. Rothman does not dispute that post-Transaction, "HHI levels are . . . lower than they were prior to December 2018." (PX7048 (Rothman Trial Dep. at 97)).

H. Regulation of E-Vapor Products by the FDA

1. Background

189. The FDA has the authority to regulate tobacco products pursuant to the Family Smoking Prevention and Tobacco Control Act (the "Tobacco Control Act"), passed in 2009, which amended the Food, Drug, and Cosmetic Act to bring tobacco products under the FDA's purview. (Pub. L. No. 111-31, 123 Stat. 1776 (2009); Murillo (Altria/JLI) Tr. 2901-02; PX8005 (Graham (NJOY) Decl. at 001-02 ¶ 7)).

190. Under the Tobacco Control Act, regulated tobacco products sold in the United States as of February 15, 2007, are "grandfathered products" and may be marketed without FDA premarket review. (Garnick (Altria) Tr. 1685-86, 1688; PX8009 (Garner (Reynolds) Decl. at 002 ¶ 7); *see also* 21 U.S.C. § 387j(a)).

191. "New tobacco products" – meaning those that were not marketed in the United States as of February 15, 2007, or any significant modification of a grandfathered product – are subject to the Food, Drug, and Cosmetic Act's requirement of premarket review. (21 U.S.C. § 387j(a)(1); *see also* Garnick (Altria) Tr. 1685-86; PX8009 (Garner (Reynolds) Decl. at 002 ¶ 8)).

192. E-cigarettes were not included in the original list of tobacco products subject to FDA regulation under the Tobacco Control Act; however, Congress authorized the FDA to

issue regulations deeming additional categories of tobacco products subject to the Tobacco Control Act. (21 U.S.C. § 387a(b); *see also* Murillo (Altria/JLI) Tr. 2903-05).

193. For products that were subject to the FDA's original regulatory authority and were introduced or modified after February 2007, there are three regulatory pathways for manufacturers to obtain marketing authorization, set forth below (21 U.S.C. § 387j(a)(2)):

(a) A manufacturer can file a substantial equivalence report for a new product that is "substantially equivalent" to a tobacco product that was marketed on the grandfather date or to a product that was previously found substantially equivalent. This requires showing that the product has the same characteristics – meaning the same materials, design, and other features – as the predicate product or that the different characteristics do not raise different questions of public health. (Garnick (Altria) Tr. 1685-86; PX8005 (Graham (NJOY) Decl. at 002 ¶ 11; PX8009 (Garner (Reynolds) Decl. at 002-03 ¶ 10)). That is the pathway used by most cigarettes and smokeless tobacco products. (Garnick (Altria) Tr. 1686).

(b) A manufacturer can file an exemption request if "the change to the tobacco product is minor and that change only involves a change to an additive in a tobacco product that can be sold under the [Food, Drug, and Cosmetic Act]." (PX8005 (Graham (NJOY) Decl. at 002 ¶ 12); *see also* PX8009 (Garner (Reynolds) Decl. at 002 ¶ 10)). Such exemptions are "rare." (PX8005 (Graham (NJOY) Decl. at 002 ¶ 12); *see also* Murillo (Altria/JLI) Tr. 2915-16 (describing this as a "small pathway")). Exemptions are generally only available to products that were on the market in 2007. (Murillo (Altria/JLI) Tr. 2915-16).

(c) If a product does not satisfy the requirements of the two other pathways, a manufacturer must file a premarket tobacco product application ("PMTA") under 21 U.S.C. § 387j, which requires showing that the new tobacco product would be "appropriate for the protection of the public health." (PX8005 (Graham (NJOY) Decl. at 002, 003 ¶¶ 10, 14); PX8009 (Garner (Reynolds) Decl. at 002-03 ¶ 10); Garnick (Altria) Tr. 1686). This involves a "rigorous analysis" and requires extensive scientific studies, ranging from toxicological assessments to clinical studies, which "take[] a lot of money and a lot of time." (Garnick (Altria) Tr. 1686).

2. The Deeming Rule

194. In April 2014, the FDA announced its intention to regulate e-cigarettes through rulemaking that would deem such products subject to its regulatory authority under the

Tobacco Control Act. (79 Fed. Reg. 23,142, 23,143 (Apr. 25, 2014); Murillo (Altria/JLI) Tr. 2904).

195. In May 2016, following extensive public comments on the rulemaking referenced in F. 194, the FDA issued a final rule. (81 Fed. Reg. 28,974 (May 10, 2016); Murillo (Altria/JLI) Tr. 2904-05). That regulation, which has become known as the "Deeming Rule," declared all products (other than accessories) that met the Tobacco Control Act's definition of a "tobacco product" to be subject to the FDA's authority under the Act, effective August 8, 2016. (81 Fed. Reg. 28,974, 29,102; PX8005 (Graham (NJOY) Decl. at 002 ¶ 8, 003 ¶ 17); PX8009 (Garner (Reynolds) Decl. at 003-04 ¶¶ 13-14)). At present, essentially all tobacco products that can be regulated by the FDA are regulated, including e-cigarettes. (PX8005 (Graham (NJOY) Decl. at 002 ¶ 8); PX8009 (Garner (Reynolds) Decl. at 004 ¶ 15); Garnick (Altria) Tr. 1687-88).

196. As a result of the Deeming Rule, any deemed product that was not marketed legally as of February 15, 2007, is considered a "new tobacco product" subject to the requirement of FDA premarket review. This means that manufacturers of these products must secure authorization under one of the three regulatory pathways outlined above in F. 193. (PX8005 (Graham (NJOY) Decl. at 002 ¶ 9); PX8009 (Garner (Reynolds) Decl. at 004 ¶ 16); *see also* Garnick (Altria) Tr. 1685-86).

197. In practical effect, the Deeming Rule subjects all e-cigarette products to the third pathway described in F. 193 – the PMTA requirement. This is because "no [e-vapor] product has yet to be identified" as a product that had been marketed legally "as of February 15, 2007." (PX8009 (Garner (Reynolds) Decl. at 004-05 ¶ 18); Garnick (Altria) Tr. 1685-86). Thus, "[t]here are no clearly identified grandfathered vapor products that [can] serve as the predicate for a substantial equivalence application. Further, the FDA has stated that manufacturers of [e-vapor products] will face difficulty demonstrating a product is substantially equivalent to a combustible cigarette or smokeless tobacco product." (PX8005 (Graham (NJOY) Decl. at 002-03 ¶ 13)).

198. "To prevent [e-vapor] manufacturers from immediately having to remove all newly deemed products from the market upon the effective date of the . . . Deeming Rule," the FDA announced that it would delay enforcement of the Deeming Rule for several years for those products that were on the market as of August 8, 2016, to give manufacturers adequate time to prepare PMTAs. (81 Fed. Reg. at 28,978; PX8009 (Garner (Reynolds) Decl. at 005 ¶ 19)). In other words, the FDA established a grace period permitting then-existing e-cigarette products to "stay on the market, provided [the e-vapor manufacturers] filed a PMTA for [those] product[s] by a certain date." (Garnick (Altria) Tr. 1687).

199. The Deeming Rule has fundamentally changed the e-vapor industry (PX7018 (Schwartz (Altria) Dep. at 30-31)), including by imposing two important practical implications. First, all existing e-cigarette manufacturers must secure PMTA approval from the FDA in order to keep their product on the market. (Garnick (Altria) Tr. 1688-90; PX7009 (Burns (JLI) IHT at 74) ("Getting PMTA approval is critical to stay in the marketplace.")). Second, the Deeming Rule effectively "froze[]" e-cigarette product offerings as they

existed on August 8, 2016. (Garnick (Altria) Tr. 1699; *see also* Jupe (Altria) Tr. 2218 (describing the market for e-vapor products as "locked down")). By limiting its exercise of enforcement discretion to those e-vapor products that were on the market as of August 8, 2016, the FDA has "prevent[ed] new products from readily entering." (PX8005 (Graham (NJOY) Decl. at 003 ¶ 19)).

200. As a result of the Deeming Rule, while manufacturers could acquire (or sell) product lines that existed as of August 8, 2016, they could not introduce new products into the market without going through the PMTA process. (Garnick (Altria) Tr. 1690, 1699).

201. The FDA did not provide clear guidance under the Deeming Rule as to what changes a manufacturer could or could not make to a product without obtaining premarket authorization through the PMTA process, which created some uncertainty. (Garnick (Altria) Tr. 1691). The Deeming Rule includes in the definition of "new tobacco products," "any modification (including a change in design, any component, any part, or any constituent, . . . or in the content, delivery or form of nicotine, or any other additive or ingredient) of a tobacco product[.]" (21 U.S.C. § 387j(a)(1)(B)).

202. In January 2017, the FDA issued guidance for vape shops stating that "[m]odifying a product would generally result in a new tobacco product for which a vape shop is required to seek premarket authorization." (PX1593 (Altria) at 008). The guidance qualified that the FDA would not enforce this requirement for changes that were "consistent with the specifications provided by the original manufacturer," on the assumption that these modifications would not "alter the performance of the tobacco product as described or intended by the original manufacturer." (PX1593 (Altria) at 008).

203. In the absence of specific guidance from the FDA for e-vapor products, apart from those sold in vape shops, manufacturers, including Altria, attempted to apply vape shop guidance to cig-a-likes and pod-based products. (Garnick (Altria) Tr. 1691-93).

204. Altria interpreted the Deeming Rule to generally prohibit marketing e-vapor products having any significant modifications from the products that were on the market as of August 8, 2016, without first receiving regulatory approval through the PMTA process. (Garnick (Altria) Tr. 1691-92).

205. Altria believed that "if the modification changed the aerosol delivery, changed the composition or changed consumer exposure or usage behavior, it was a new product" within the meaning of the Deeming Rule. (PX7026 (Gardner (Altria) Dep. at 41-42); *see also* Murillo (Altria/JLI) Tr. 2927-28).

206. Altria believed that adding nicotine salts to a product would be a significant change that would "absolutely" require a PMTA. (Murillo (Altria/JLI) Tr. 2927-28, 3069).

207. Any new tobacco product that is required to have premarket authorization by the FDA and does not have such authorization is considered an adulterated product. (21 U.S.C. § 387b(6); *see also* PX8009 (Garner (Reynolds) Decl. at 003 ¶ 12)). Introducing

adulterated products into the market is prohibited by statute and violations of this prohibition can result in both civil and criminal penalties. (21 U.S.C. §§ 331, 333; *see also* PX8009 (Garner (Reynolds) Decl. at 003 ¶ 12)).

3. Recognition of Continuum of Risk

208. In July 2017, the FDA announced "a new comprehensive plan for tobacco and nicotine regulation that [would] serve as a multi-year roadmap to better protect kids and significantly reduce tobacco-related disease and death." This was a significant policy announcement. (PX9058 (FDA) at 001; *see also* Murillo (Altria/JLI) Tr. 2905-06).

209. The centerpiece of the FDA's new regulatory approach (F. 208), was a recognition that nicotine "is delivered through products that represent a continuum of risk and is most harmful when delivered through smoke particles in combustible cigarettes." (PX9058 (FDA) at 001; *see also* Garnick (Altria) Tr. 1694-97). Nicotine replacement therapy was on the other end of the risk continuum. (Murillo (Altria/JLI) Tr. 2905-06; Jupe (Altria) Tr. 2222-23).

210. The objective of the FDA's new regulatory approach (F. 208) was to "try to move people down th[e] continuum of risk," (Murillo (Altria/JLI) Tr. 2905-06) by helping smokers "migrate" from combustible products "to noncombustible tobacco products." (Garnick (Altria) Tr. 1694-95).

211. The FDA's new regulatory approach (F. 208) is known by the shorthand term "continuum of risk." (Murillo (Altria/JLI) Tr. 2905-06).

212. The idea behind the FDA's continuum of risk policy was to get smokers to migrate away from noncombustible tobacco products, if they cannot or will not quit smoking. Because this required a pool of products for smokers to migrate to, Altria was encouraged that the FDA would be supportive of noncombustible tobacco products, such as e-vapor products. (Murillo (Altria/JLI) Tr. 2905-06; Garnick (Altria) Tr. 1694-95).

213. On July 27, 2017, the FDA issued a statement indicating that it would tighten restrictions on cigarettes, while working to facilitate the success of innovative reduced-risk products, such as e-vapor, that could convert adult smokers away from combustible cigarettes and thereby promote overall public health. (PX9058 (FDA) at 001-02).

214. The July 27, 2017 FDA statement noted that policies to "help smokers quit cigarettes" must also "protect kids" and that the FDA would therefore be assessing those two goals together, including by seeking input on the role that flavors in e-cigarettes "play in attracting youth and may play in helping some smokers switch to potentially less harmful forms of nicotine delivery." (PX9058 (FDA) at 001-02).

4. Premarket Tobacco Product Applications

215. The PMTA process is an "expensive, time-consuming process." (Quigley (Altria) Tr.

2008-09; *see also* Farrell (NJOY) Tr. 358 (agreeing that PMTAs cost millions of dollars); Begley (Altria) Tr. 1039, 1045 (explaining that PMTAs involve "lots of" "really long-term comprehensive, complicated studies"); Willard (Altria) Tr. 1382 ("[I]t was a very expensive process"); Garnick (Altria) Tr. 1699 (describing the PMTA process as "very expensive and time-consuming"); Schwartz (Altria) Tr. 1866 (stating that the PMTA process is "a very costly, protracted process"); Jupe (Altria) Tr. 2218 (explaining that the PMTA process is "not dissimilar to kind of the . . . process of getting a new [pharmaceutical] drug or a medical device on the market"); King (PMI) Tr. 2457 (describing IQOS PMTA as a "very heavy application"); PX8005 (Graham (NJOY) Decl. at 004 ¶ 20) ("A PMTA is a very substantial undertaking[.]")).

a. Standards for PMTA Approval

216. To obtain FDA authorization for an e-vapor product pursuant to a PMTA, a manufacturer must demonstrate that the product is "appropriate for the protection of the public health." (21 U.S.C. § 387j(c)(2)(A)).

217. For pharmaceuticals, the standard for approval is "safe and effective." Because "tobacco products are not inherently and cannot be safe and effective, . . . a different standard had to be devised." Congress adopted the standard of "appropriate for the protection of the public health." This "protection of the public health" standard is unique to tobacco products. (Murillo (Altria/JLI) Tr. 2919).

218. In determining whether a manufacturer has met the protection of public health standard, the Tobacco Control Act requires the FDA to weigh: (1) "the risks and benefits to the population as a whole, including users and nonusers of tobacco products"; (2) the "likelihood that existing users of tobacco products will stop using such products"; and (3) the "likelihood that those who do not use tobacco products will start using such products." (21 U.S.C. § 387g(a)(3)(B)(i); *see also* Murillo (Altria/JLI) Tr. 2919, 3032).

219. Under the PMTA framework, a manufacturer must demonstrate that the product (1) "reduce[s] the constituents of harm that smokers are taking in when they're smoking"; (2) "reduce[s] the risk" relative to other tobacco products; and (3) will actually "convert" smokers without having undue unintended effects on the non-tobacco-using population. (Murillo (Altria/JLI) Tr. 2917-20; *see also* PX9027 (FDA) at 026-27).

220. Industry participants understand that the standards for successfully obtaining a PMTA are "rigorous." (Garnick (Altria) Tr. 1685-86; *see also* PX8009 (Garner (Reynolds) Decl. at 011-12 ¶ 37)). "The FDA will grant a PMTA only if the manufacturer meets a very demanding standard." (PX8005 (Graham (NJOY) Decl. at 003 ¶ 14); *see also* PX7017 (Magness (Altria) Dep. at 89) (describing a PMTA as "a very high bar")). The "outcome" of the FDA approval process "is uncertain." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 23)).

b. PMTA Requirements

221. The specific required elements of a PMTA, which are outlined in the Food, Drug, and Cosmetic Act, are "expansive." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 21); *see also* RX2019 (Altria) at 017 (summarizing application requirements); Murillo (Altria/JLI) Tr. 2915-21 (discussing application elements)).

222. The PMTA process requires a manufacturer to submit "full reports of all information," including that which is "known" or "should reasonably be known" to the applicant, "concerning investigations which have been made to show the health risks of such tobacco product and whether such tobacco product presents less risk than other tobacco products." (21 U.S.C. § 387j(b)(1)(A)).

223. The PMTA process requires manufacturers to produce, among other things, "a full statement of the components, ingredients, . . . and . . . principles of operation"; "a full description of the methods used in, and the facilities . . . used for, the manufacture" of the product; "samples of such tobacco product"; and "specimens of the labeling proposed to be used." (21 U.S.C. § 387j(b)(1)(B), (C), (E), (F)). There is also a catchall provision requiring manufacturers to produce "such other information relevant to the subject matter of the application as the [FDA] may require." (21 U.S.C. § 387j(b)(1)(G); *see also* PX8009 (Garner (Reynolds) Decl. at 009 ¶ 30)).

224. The FDA requires, as part of showing that an e-vapor product is appropriate for the protection of public health, that the manufacturer address in the PMTA the "relative health risks" compared to "other tobacco products on the market," including both cigarettes and "other [e-cigarettes]." (PX9027 (FDA) at 026-27; *see also* Garnick (Altria) Tr. 1603-05 (explaining that manufacturers must show that the product is less risky than cigarettes and address the risk relative to "other products of the same category")).

225. In June 2019, three years after the Deeming Rule was issued, the FDA released a final guidance document offering detailed instructions for e-cigarette PMTAs. (Murillo (Altria/JLI) Tr. 2908-09; *see also* PX9027 (FDA)). The guidance document instructs applicants to submit a wide variety of information ranging from scientific literature to non-clinical (not on human subjects) and clinical (on human subjects) studies. (PX9027 (FDA) at 026-27).

226. Among other things, the June 2019 guidance (F. 225) requires:

(a). "Stability information," including the "established shelf life of the product and changes in pH and constituents (including [harmful or potentially harmful constituents] and other toxic chemicals) over the lifespan of the product," and "how stability is affected by [different] storage conditions," (PX9027 (FDA) at 030; Murillo (Altria/JLI) Tr. 3071-72);

(b). A "complete list of uniquely identified constituents or chemicals . . . contained within the product or delivered by the product," including analysis of 33 constituents identified by the FDA, such as formaldehyde and nickel, (PX9027 (FDA) at 031-32);

(c). A "full assessment of the toxicological and pharmacological profile" of the product including "[t]oxicology data from the literature," "[a]nalysis of constituents . . . under both intense and non-intense use conditions," and "[c]omputational modeling of the toxicants," (PX9027 (FDA) at 037-38);

(d). A "literature review" of relevant published studies, including a summary describing each study's "design" and "statistical analysis," (PX9027 (FDA) at 035-36); and

(e). Evaluations of "how consumers perceive product harms" and the "topography of how individual users consume the product (*e.g.*, the number of puffs, puff duration, puff intensity, duration of use)." (PX9027 (FDA) at 041-42).

227. A final PMTA is "voluminous." (Garnick (Altria) Tr. 1607-08). For example, the PMTA for IQOS, a heat-not-burn device manufactured by Philip Morris International, was "close to 2 million pages." (PX7017 (Magness (Altria) Dep. at 87-88); *see also* Garnick (Altria) Tr. 1608).

c. Time Required for PMTA Preparation

228. The level of "product testing [required for a PMTA] takes a significant amount of time and is a process that cannot be sped-up." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 28); *see also* Garnick (Altria) Tr. 1699 (describing the process as "expensive" and "time-consuming"); Quigley (Altria) Tr. 2009; Schwartz (Altria) Tr. 1866 (referring to the PMTA process as "costly" and "protracted"); Gardner (Altria) Tr. 2582-83 (describing multi-year process for obtaining FDA approval); Begley (Altria) Tr. 1039, 1045 (describing multiple scientific studies that must be completed for a PMTA)).

229. The studies required for a PMTA generally cannot begin until a manufacturer has reached "design lock," meaning that it has "achieved a design for the new product that [is] not going to change." (Murillo (Altria/JLI) Tr. 2923-24). Design changes can cause delay and require repeating previous studies. (Murillo (Altria/JLI) Tr. 2930; PX7000 (Garnick (Altria) IHT at 25-26) (explaining that before starting PMTA studies, "you need to really lock down the design of the product" and that "if you don't do that and you start engaging in studies and the designers change the product, you are going to have to do the studies all over again")).

230. In limited instances, a manufacturer that discovers design flaws during the testing for a PMTA may be able to save some time using a process known as "bridging," which means

"building a bridge from the prior data to a new product." (Gardner (Altria) Tr. 2572; *see also* Murillo (Altria/JLI) Tr. 3004 ("[T]he concept of bridging is that you don't have to redo all of the work required for a PMTA for each change or each SKU [(stock keeping unit)], that you say, well, these things are sufficiently similar to each other, and here's how we prove that, and you should rely on this underlying test.")). A manufacturer may be able to use study results for research on an e-liquid with one nicotine concentration for an e-liquid with a different nicotine concentration. (PX8005 (Graham (NJOY) Decl. at 005-06 ¶ 32)).

231. Bridging prior data to a new product requires a substantial degree of similarity in the performance of the products, as well as the performance of "enforceability testing" to demonstrate that data associated with one product is applicable to another. (PX7027 (Murillo (Altria/JLI) Dep. at 74-75, 161-62); *see also* Gardner (Altria) Tr. 2572-73 (explaining that to get the benefit of bridging, the "two products [need to] behave[] the same in delivering an aerosol"); Murillo (Altria/JLI) Tr. 3003-04 (explaining that bridging requires "prov[ing]" that two products "are sufficiently similar to each other")).

232. After a manufacturer has reached design lock in the development process, it takes "approximately two years" of scientific research to prepare a PMTA. (Murillo (Altria/JLI) Tr. 2924-25; Gardner (Altria) Tr. 2582-83).

233. "Many studies [for a PMTA] can take 6-12 months or longer . . . ." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 28); *see also* Garnick (Altria) Tr. 1661 (explaining that some of the studies can "take months and months"); Murillo (Altria/JLI) Tr. 2925 (explaining that testing whether a product is stable for 12 months takes 12 months)).

234. For Reynolds, "the planning, research and final application [for [redacted] PMTAs] took nearly [redacted] years to complete." (PX8009 (Garner (Reynolds) Decl. at 018 ¶ 57), *in camera*). Reynolds estimated that studies took "from one (1) year to three (3) years to complete, which includes planning, protocol development, securing a contract laboratory to perform work, sample generation, testing conducted by the laboratory, data evaluation, and generation of the final reports." (PX8009 (Garner (Reynolds) Decl. at 015 ¶ 45)).

d. PMTA Costs

235. Conducting years of scientific studies for a PMTA is a significant expense. (Farrell (NJOY) Tr. 358; Willard (Altria) Tr. 1382; Garnick (Altria) Tr. 1699; Schwartz (Altria) Tr. 1866; Quigley (Altria) Tr. 2009; PX7046 (Rothman Dep. at 204)).

236. Manufacturers must submit a PMTA for each product or stock keeping unit ("SKU"), and the application can cost approximately $5 to $8 million per SKU. Because product lines with different flavors and nicotine strengths can have ten or more SKUs, a PMTA for a single product line easily can cost up to $50 to $100 million. (Murillo (Altria/JLI) Tr. 2950-51).

237. For Reynolds, the total cost to submit PMTAs for its Vuse Solo products was approximately [redacted] million dollars. (PX8009 (Garner (Reynolds) Decl. at 018 ¶ 56), *in camera*; *see also* PX7037 (Huckabee (Reynolds) Dep. at 120), *in camera* (agreeing that Reynolds' PMTAs cost [redacted] millions of dollars")).

238. NJOY's "PMTA is . . . likely to cost at least tens of millions of dollars." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 20); *see also* Farrell (NJOY) Tr. 358 (acknowledging that PMTAs cost millions of dollars)).

239. As of April 2020, ITG Brands' sister company, Fontem, had spent about [redacted] million preparing PMTA submissions for the companies' blu brand and estimated that, when the applications were complete, the total would be approximately [redacted] million. (PX8010 (Folmar (ITG) Decl. at 002 ¶ 7), *in camera*).

240. The PMTAs for JLI's JUUL products cost over $100 million. (Murillo (Altria/JLI) Tr. 3074; PX7009 (Burns (JLI) IHT at 71)).

241. According to Altria's cost estimates, PMTAs would cost $80 to $90 million for the MarkTen cig-a-like (PX1400 (Altria) at 010); $9 to $14 million for the MarkTen Bold cig-a-like (PX1400 (Altria) at 011), and $42 to $50 million combined for Elite and an improved Elite, referred to internally at Altria as Elite 2.0 (F. 386). (PX1400 (Altria) at 005, 007).

e. Expertise Required to Prepare PMTAs

242. "[V]ery specific expertise[]" is required to generate the underlying studies and to compile a PMTA. (Murillo (Altria/JLI) Tr. 2975).

243. The relevant tests for a PMTA "must be performed by accredited labs. These labs are limited in number and capacity." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 26); *see also* Gardner (Altria) Tr. 2557; PX7027 (Murillo (Altria/JLI) Dep. at 80) ("[T]here's a very small number of laboratories that are capable of doing validated methods with respect to vapor products."). "[E]ven with . . . pre-existing relationships [with certain labs], NJOY has faced challenges finding available [p]roviders with the capacity to conduct timely research on its products." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 27)).

244. "Studies such as in vitro toxicology studies are also extremely difficult to perform with few labs available to test [e-vapor] products." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 29)).

245. Altria was able to locate only two external companies with the capability and capacity for e-vapor PMTA work. (PX7017 (Magness (Altria) Dep. at 80)). For some studies, such as gas chromatography/mass spectrometry fingerprinting of e-vapor aerosols, "[t]here were no contract labs available to do this work" in 2018. (Gardner (Altria) Tr. 2616).

246. The relevant components of the PMTA application require "[d]ozens and dozens of scientists at [every] stage[]," ranging from chemists and physicists to toxicologists and

clinicians. (Murillo (Altria/JLI) Tr. 2918-19). Altria's core team for a given PMTA would have "25 [people], includ[ing] chemists, toxicologists, [a] battery engineer, [a] quality professional who could speak to the manufacturing system, . . . a clinical scientist or two, and then . . . some behavioral scientists." (PX7017 (Magness (Altria) Dep. at 57)).

247. Scientists working on a PMTA must possess specific expertise. (Murillo (Altria/JLI) Tr. 2975). "Conducting human subject studies . . . requires specialist expertise from Clinical Research Organizations . . . and organizations with relevant experience in behavioral research and surveys." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 26)). In addition, to "project the impact of the product on the population, an [e-vapor] manufacturer needs to develop or have access to a population model." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 31)). "These tools are not publicly available" and they are "difficult to procure or develop." (PX8005 (Graham (NJOY) Decl. at 005 ¶ 31)).

248. Many manufacturers of e-vapor products lack "the regulatory experience to oversee the production of a PMTA that is ultimately likely to be favorably acted upon by FDA." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 20)). Because the PMTA requirements are different from the premarket approval regime applicable to drugs and medical devices, "there are few individuals and counsel familiar with the PMTA process." (PX8005 (Graham (NJOY) Decl. at 004 ¶ 21)).

f. Evolution of PMTA Deadlines

249. The Deeming Rule originally required manufacturers to submit PMTAs for on-market e-vapor products by August 8, 2018, which was 24 months after the effective date of the Deeming Rule. (Murillo (Altria/JLI) Tr. 2943-44; PX8009 (Garner (Reynolds) Decl. at 005 ¶ 19)).

250. In May 2017, the FDA announced that it was extending the original PMTA deadline by three months, from August 2018 to November 2018. (PX8009 (Garner (Reynolds) Decl. at 005-06 ¶ 20)).

251. In July 2017, the FDA extended the PMTA deadline by nearly four years, from November 2018 to August 8, 2022. (PX8009 (Garner (Reynolds) Decl. at 006 ¶ 21)).

252. In March 2019, the FDA announced its intent to modify the PMTA deadline for certain flavored e-vapor products (all flavors other than tobacco, menthol, and mint) by moving it back one year, from August 8, 2022 to August 8, 2021. (RX2012 (FDA) at 003; Murillo (Altria/JLI) Tr. 2945; PX8005 (Graham (NJOY) Decl. at 003 ¶ 18)).

253. In March 2018, certain public health organizations filed a lawsuit challenging the FDA's extension of the PMTA deadline to August 2022. (Murillo (Altria/JLI) Tr. 2944). The challengers prevailed. In the summer of 2019, the United States District Court for the District of Maryland accelerated the deadline by two years, ordering the FDA to require all PMTAs for newly deemed products to be submitted by May 12, 2020. (Murillo (Altria/JLI) Tr. 2945; PX8009 (Garner (Reynolds) Decl. at 006-07 ¶ 23); *see also Am.*

Acad. of Pediatrics v. FDA, 379 F. Supp. 3d 461, 498 (D. Md. 2019) (vacating 2017 Guidance); *Am. Acad. of Pediatrics v. FDA*, 399 F. Supp. 3d 479, 481 (D. Md. 2019) (imposing new deadline)).

254. In the spring of 2020, the PMTA deadline was extended once more when the disruption caused by COVID-19 forced manufacturers and the FDA to work remotely. The ultimate PMTA deadline for on-market e-vapor products was September 8, 2020. (Murillo (Altria/JLI) Tr. 2945; *Am. Acad. of Pediatrics v. FDA*, No. 18-cv-883, Dkt. No. 182 (D. Md. April 22, 2020) (Order)).

255. A manufacturer that has filed a PMTA for a product by the deadline can continue to market that product pending the FDA's review of its submission. (Murillo (Altria/JLI) Tr. 3028-29).

256. If a manufacturer did not submit a PMTA for an on-market product by the September 2020 deadline, the manufacturer was required to remove that product from the market. (Murillo (Altria/JLI) Tr. 2946).

g. Time for PMTA Review by the FDA

257. After a manufacturer submits a PMTA, it takes years for the FDA to review the application and determine whether to approve the product. (Jupe (Altria) Tr. 2301 (explaining that the FDA's review of PMTA applications takes "a long time," most likely at least 18 months to two years if not longer); Garnick (Altria) Tr. 1661 ("[I]t takes the FDA a long time to review a PMTA for an e-vapor product."); Gardner (Altria) Tr. 2582-83 (observing that a year for FDA review would be "optimistic[]")).

258. The FDA can require manufacturers to submit supplemental information for their PMTAs, which can add time to the review process. (Jupe (Altria) Tr. 2222; PX7027 (Murillo (Altria/JLI) Dep. at 39)).

259. Before the September 2020 deadline, the FDA received at least a half million PMTAs for e-vapor products. (Murillo (Altria/JLI) Tr. 2932). Some of these applications have been pending for over two years. (Jupe (Altria) Tr. 2301). As of the time of trial, no e-vapor product had been approved. (Jupe (Altria) Tr. 2301; Garnick (Altria) Tr. 1608).

260. For tobacco products in product categories other than e-vapor that have previously received PMTA approval, the FDA's review took two to four years. PMI submitted a PMTA for its IQOS heat-not-burn product in May 2017 and the FDA did not approve the product until April 2019. (Garnick (Altria) Tr. 1661; PX8009 (Garner (Reynolds) Decl. at 013-14 ¶ 41); *see also* Murillo (Altria/JLI) Tr. 2908; PX7017 (Magness (Altria) Dep. at 282)). The application for Swedish Match, an oral tobacco product, took over four years for the FDA to approve. (PX7017 (Magness (Altria) Dep. at 86, 282)).

261. On October 12, 2021, the FDA announced the first authorization of an e-cigarette product pursuant to a PMTA, which authorized Reynolds' Vuse Solo cig-a-like device and

tobacco-flavored cartridges. The FDA also issued ten marketing denial orders for Vuse flavored cartridges. The FDA stated it was "still evaluating [Reynolds'] application for menthol-flavored products under the Vuse Solo brand." FDA News Release, "FDA Permits Marketing of E-Cigarette Products, Marking First Authorization of its Kind by the Agency," https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-e-cigarette-products-marking-first-authorization-its-kind-agency.

5. Conversion Potential

262. Conversion rates are a measure of the rate at which consumers that use a product stop smoking. (Gardner (Altria) Tr. 2586).

263. The potential of an e-vapor product to convert adult smokers away from combustible cigarettes is one of the factors that the FDA assesses in the determining whether an e-vapor product meets the standard of "[a]ppropriate for the protection of public health." (PX4149 (Altria) at 029; *see also* Quigley (Altria) Tr. 1986 (explaining that in determining whether the e-vapor product is appropriate for the protection of public health, the FDA considers the "relative risk reduction")).

264. Demonstrating the conversion capability "is a critical part of the evidence [Altria] ha[s] to produce" to the FDA to win PMTA approval. (Jupe (Altria) Tr. 2220).

265. Proof of conversion potential is "necessary to demonstrate" that an e-vapor product meets the "appropriate for the protection of public health" standard for FDA approval. (Gardner (Altria) Tr. 2586).

266. "[I]f adult smokers don't convert to the product, you're not reducing harm to the population and to the adult smokers," and from a regulatory perspective, "the product had no reason for being in the market." (Gardner (Altria) Tr. 2586; *see also* PX7017 (Magness (Altria) Dep. at 279) ("If the products are unsuccessful at converting adult smokers, they will not succeed through the regulatory pathway.")).

267. Conversion potential is related to nicotine satisfaction. Smokers who are looking to switch to an e-vapor product need the product to provide nicotine satisfaction. (Gardner (Altria) Tr. 3089-90).

268. Conversion rates generally cannot be measured premarket. Therefore, for PMTA purposes, the focus is on establishing the product's ability to convert, or conversion potential. (Gardner (Altria) Tr. 2644-45; PX4149 (Altria) at 029).

269. The FDA has not provided clear guidance on the criteria or thresholds that it will use when reviewing PMTAs to assess whether e-cigarette products have adequate conversion potential to be considered appropriate for the protection of public health. (Gardner (Altria) Tr. 2640-41).

270. In order to demonstrate conversion potential, it is not sufficient to show that smokers are using both e-vapor and traditional cigarettes. (Murillo (Altria/JLI) Tr. 2906-07; PX7015 (Gogova (Altria) Dep. at 126-27); PX7023 (Fernandez (Altria) Dep. at 79-80, 83)). That is because, "unless consumers actually switch to the product, there is no reduction of risk." (PX7026 (Gardner (Altria) Dep. at 242)). "They're just maintaining their cigarette consumption but adding something to it[.]" (Murillo (Altria/JLI) Tr. 2906-07).

6. FDA Statements in April/May 2018

271. On April 23, 2018, the FDA issued a statement announcing a "large-scale undercover nationwide blitz to crack down on the sale of e-cigarettes" to minors, online and in brick and mortar stores. (RX0155 (FDA) at 001-02).

272. The FDA's April 23, 2018 statement acknowledged "the possibility for . . . products like e-cigarettes . . . to provide a potentially less harmful alternative for currently addicted individual adult smokers who still want to get access to satisfying levels of nicotine without many of the harmful effects that come with the combustion of tobacco[,]" but further acknowledged the need "to step in to protect our kids" from "getting hooked" on more "novel forms of nicotine-delivery" products. (RX0155 (FDA) at 004). The FDA warned manufacturers that it would be taking additional steps to hold manufacturers "accountable" to make sure e-cigarettes "aren't getting into kids' hands." (RX0155 (FDA) at 002-04).

273. In April and May 2018, the FDA sent letters to five e-vapor manufacturers of pod-based products, including JLI, requiring each company "to submit important documents to better understand the reportedly high rates of youth use" of their products. These letters targeted pod-based products containing nicotine salts. Elite did not contain nicotine salts (F. 445) and Altria did not receive one of these letters. (RX0155 (FDA) at 003; *see also* RX0156 (FDA) at 001; Willard (Altria) Tr. 1369).

274. On May 17, 2018, the FDA issued a press release regarding the letters referenced in F. 273, which emphasized that the "agency plan[ned] to explore additional restrictions on the sale and promotion" of e-vapor products, including "measures on flavors/designs that appeal to youth." (RX0156 (FDA) at 002).

7. FDA Statement and Letters in September 2018

275. The FDA issued a statement demanding e-vapor manufacturers take "bold action" to address the FDA's concerns related to youth e-cigarette use on September 11, 2018 (the "September 11 Statement") and sent a letter on September 12, 2018 to five major e-vapor manufacturers including JLI and Altria (the "September 12 Letter"). (RX1921 (FDA) at 005-07; RX1120 (FDA) (letter to Altria); PX9051 (FDA) (letter to JLI)).

276. In the September 11 Statement, FDA Commissioner Gottlieb reiterated "that tobacco products exist on a continuum of risk"; and "that there are opportunities to move adult smokers down that ladder of harm." (RX1921 (FDA) at 008).

277. The FDA's September 11 Statement included the following points:

- The FDA would not "tolerate a whole generation of young people becoming addicted to nicotine as a tradeoff for enabling adults to have unfettered access to these same products." (RX1921 (FDA) at 003).

- The FDA was considering whether to "curtail the marketing and selling of flavored products." (RX1921 (FDA) at 004).

- The FDA was "re-examining the enforcement discretion we currently exercise for other e-cig[arette] products currently on the market without authorization." (RX1921 (FDA) at 006).

- The FDA was "especially focused on the flavored e-cigarettes" and was "seriously considering a policy change that would lead to the immediate removal of these flavored products from the market." (RX1921 (FDA) at 006).

278. The FDA's September 11 Statement concluded: "Let me be clear: Everything is on the table. This includes the resources of our civil and criminal enforcement tools." (RX1921 (FDA) at 007).

279. In the September 11 Statement, Commissioner Gottlieb explained that the FDA issued five letters to e-vapor manufacturers to put them "on notice." (RX1921 (FDA) at 006-07). Gottlieb called for manufacturers "to respond with forceful plans . . . or face regulatory consequences" and to take "bold action to reform their . . . practices." He reiterated the FDA's expectation that these manufacturers would bring those "robust plans" to the FDA in 60 days. (RX1921 (FDA) at 006-008).

280. In its September 12 Letter to Altria, the FDA noted that its spring "blitz" of retailers had uncovered "the illegal sale of MarkTen products to minors" and demanded that Altria take "prompt action[.]" (RX1120 (FDA) at 002-03).

281. The FDA's September 12 Letter advised Altria that the FDA was "reconsidering" its policy of limiting the exercise of enforcement discretion with respect to e-vapor products allowed under the Deeming Rule – *i.e.*, the FDA was raising the possibility that all e-vapor products, including those on the market before August 8, 2016, would need to be removed unless and until they received PMTA authorization. (RX1120 (FDA) at 002; *see also* Murillo (Altria/JLI) Tr. 2963 (recalling FDA's letter "made clear" that the options on the table included "accelerating the deadlines or taking products off the markets pending an application or approval")).

282. The FDA asked Altria to both meet with the FDA and respond in writing within 60 days with "a detailed plan . . . to address and mitigate widespread use by minors." The FDA listed "[r]emoving flavored products from the market until those products can be

reviewed" by the FDA as part of the PMTA process as an example of what Altria could include as part of its plan. (RX1120 (FDA) at 003). Altria understood this comment to "strongly suggest[]" that it should remove flavored products from the market pending FDA review. (Willard (Altria) Tr. 1441).

283. The FDA's September 12 Letter, coming "from [Altria's] most important regulator[,]" was something that Altria took "very seriously." (Willard (Altria) Tr. 1322, 1437; PX7027 (Murillo (Altria/JLI) Dep. at 202) (Altria took the letter "extremely seriously.")).

284. Willard perceived the FDA Commissioner's letter as "pretty threatening," as the Commissioner was "essentially . . . saying, you're part of the problem, and I expect you to contribute to fixing it. I expect you to do it quickly and completely." (Willard (Altria) Tr. 1437, 1439).

285. Murillo could not "overstate the significance" of the FDA's statement that it was reevaluating its compliance policy regarding closed system products. (Murillo (Altria/JLI) Tr. 2962). In his view, the FDA's letter "cast a pall over the vapor category[.]" (Murillo (Altria/JLI) Tr. 2961).

286. For Altria, the relationship with its regulator, the FDA, is critical to its business. (Begley (Altria) Tr. 1046-47) ("[Nu Mark] thought it was important to engage on various regulatory issues, legislative issues, and certainly on underage e-vapor use, and . . . just think as a responsible leader in the tobacco space . . . because society can revoke your license to operate at any point in time."); PX7031 (Willard (Altria) Dep. at 270-71) (explaining that "[t]here were few things [Altria] took more seriously than" comments and guidance from the FDA because the "FDA had regulatory authority over the US tobacco business, and they ultimately decided which products could stay on the market, [and] which products had to be removed from the market").

287. Altria believes that if the FDA demands "bold action" in response to youth vaping, as it did in the September 12 Letter (RX1921 (FDA) at 007), that is a request that Altria must take seriously and act upon. (Willard (Altria) Tr. 1437; PX7027 (Murillo (Altria/JLI) Dep. at 202)).

288. The FDA's September announcement and letter had a "profound impact" on Altria. As Garnick explained: "[F]or a number of years [Altria] had devoted a good deal of resources, time, and attention at reducing youth usage numbers for cigarettes, and we got them so that they were at an all-time low. Then for this issue to come up with respect to e-vapor products was something . . . we really wanted . . . to address." (Garnick (Altria) Tr. 1757-58).

8. FDA Flavor Ban in January 2020

289. In January 2020, the FDA announced a new enforcement policy that required all non-tobacco, non-menthol flavored cartridge-based e-cigarettes (such as fruit and mint-flavored pods and cig-a-likes) to be removed from the market until they receive PMTA

approval. (PX9016 (FDA) at 001) ("Flavor Ban"). The Flavor Ban took effect in February 2020. (PX9016 (FDA) at 002).

290. Pursuant to the FDA's Flavor Ban, no e-vapor manufacturer is permitted to sell pod-based products or cig-a-likes in flavors other than tobacco or menthol without premarket authorization. (PX9016 (FDA); Crozier (Sheetz) Tr. 1495-96).

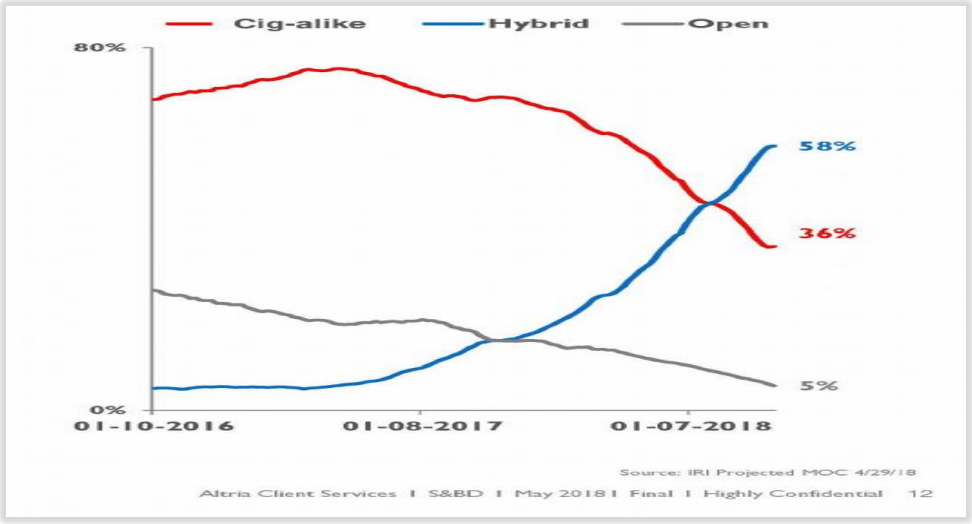
I. Background on Elite

1. Assessment of Cig-a-likes versus Pods

291. By early 2015, it was clear to Nu Mark leadership, including Joe Murillo, then President and General Manager of Nu Mark, that "cig-a-like products were not going to be of sufficiently deep and broad appeal . . . to convert large numbers of [smokers.]" (PX7007 (Murillo (Altria/JLI) IHT at 117)).

292. "[F]or many smokers and vapers, [cig-a-likes] were underpowered and did not provide enough satisfaction." (RX1990 (JLI) at 003; *see also* PX7030 (Wexler (Turning Point Brands) Dep. at 35-36) (explaining that cig-a-likes are ineffective at "deliver[ing] the nicotine to the consumer"); *see also* Begley (Altria) Tr. 1030-31 (explaining that consumers did not find early e-vapor products satisfying)).

293. Gifford and Begley presented to the Board, in May 2018, a slide based on IRI projected sales data showing "the cigalike share of total e-vapor [was] plummeting" compared to pods, called "hybrids" in the below chart. The share of cig-a-likes started at in excess of 70 percent share in January 2016 and dropped to 36 percent in January 2018, while the share of pods grew to 58 percent in that same time period. (Willard (Altria) Tr. 1365-67; RX0272 (Altria) at 013) (excerpted).



294. Between 2016 and the end of 2017, sales of pods increased by over 600 percent, driven largely by JUUL. At the same time, the cig-a-like segment, in which Nu Mark was selling

its only e-vapor product at the time, was contracting, with volume dropping by 5,800,000 units in 2017 compared to the prior year. (PX4012; RX0746 (Altria) at 038; *see also* Gifford (Altria) Tr. 2721-22 (describing how Altria called pod-based products "hybrid in the beginning")).

295. As of 2017, Nu Mark's product line consisted solely of cig-a-likes. (PX7014 (Baculis (Altria) Dep. at 144-45)).

296. The lack of a pod product was a significant gap in Nu Mark's portfolio. (PX7014 (Baculis (Altria) Dep. at 144-45); Schwartz (Altria) Tr. 1866 ("Cigalike was declining very quickly. The pod business was growing exponentially, driven by JUUL. And . . . [Altria was] getting [its] butt[] kicked week in and week out."); *see also* PX7018 (Schwartz (Altria) Dep. at 152-53) (characterizing Nu Mark as "far behind" its competition)).

2. Acquisition of Elite

297. Given the August 8, 2016 deadline imposed under the Deeming Rule, Altria could not in 2017 develop and bring to market a pod-based product of its own. In order to sell a pod product to compete with JUUL, Altria would have to acquire a pod product that had been on the market prior to August 8, 2016. (Begley (Altria) Tr. 1044).

298. In the spring of 2017, Altria launched what it called "Project Mule" – a project for pursuing "potential acquisitions of pod-based products." (Begley (Altria) Tr. 1069; *see also* RX1103 (Altria) at 006 ("Adding a closed-tank product to Nu Mark's portfolio is a priority[.]")).

299. In late May 2017, Altria's strategy & business development ("S&BD") group identified six potential pod products and associated companies that were considered for potential acquisition: the k-stick, by Kangertech; Bo, by J Well; Cync, by Vape Forward, NEX Elite, by Smoore; My, by Von Erl; and Juul, by Pax Labs (which later became JLI). Based on "conversations with a number of different companies" and consumer research, S&BD concluded that only two of the six companies presented attractive options for acquisition, Pax Labs and Von Erl, with Pax Labs being the number one choice, followed by Von Erl. (Begley (Altria) Tr. 1073; RX1103 (Altria) at 007, 023).

300. In May 2017, as part of an update on Project Mule, S&BD recommended "accelerated evaluation" of the [Juul] opportunity, though a transaction could be expensive and complex." (RX1103 (Altria) at 009).

301. In April 2017, Altria had an initial discussion with JLI about a possible acquisition. The parties did not progress past the exploratory phase. (Begley (Altria) Tr. 1008, 1074).

302. In the spring of 2017, S&BD submitted an investment proposal to Von Erl. (RX1103 (Altria) at 023). In July 2017, Von Erl made a distribution deal with Imperial (the corporate owner of ITG). (RX0865 (Altria) at 012; *see also* Begley (Altria) Tr. 1074).

Imperial subsequently announced that it was acquiring Von Erl and would relaunch Von Erl's products under a new brand name, *m*yblu. (RX1912 at 001-02).

303. In late June 2017, the e-vapor product team at Nu Mark began to explore a possible investment in NEX Elite, a product developed and manufactured by a Chinese company called Smoore. (PX4126 (Altria) at 001). NEX Elite was a product that S&BD had previously considered as part of its original Project Mule assessment but had not included as a potentially attractive option. (RX1103 (Altria) at 007; RX0865 (Altria) at 012).

304. Nu Mark licensed the exclusive right to commercialize NEX Elite from Smoore in late October 2017, for a sum of $500,000. (Schwartz (Altria) Tr. 1862-63, 1868-69; PX7018 (Schwartz (Altria) Dep. at 86); PX0032 (Altria) at 017-18).

305. Altria acquired rights to NEX Elite and to Cync believing it would be helpful to have more than one pod-based product to market. (Begley (Altria) Tr. 1074-75).

306. Altria's Cync acquisition was a "strategic hedge." (RX0865 (Altria) at 023).

307. Cync's market launch would eventually be put "on [h]old" indefinitely in light of an "[a]cute battery hazard" issue, "[a]cute toxicological risk due to nickel components," and "[f]ailed child resistance testing," among other problems. (PX4149 (Altria) at 093).

308. Altria never commercialized Cync. (Schwartz (Altria) Tr. 1914).

309. After Altria acquired rights to NEX Elite (F. 304), Nu Mark worked to launch Elite as quickly as possible. (Begley (Altria) Tr. 990; PX7014 Baculis (Altria) Dep. at 133-34).

310. Based on marketplace and consumer dynamics, Altria concluded there was an "urgent need to compete beyond the cig-a-like category." (RX1292 (Altria) at 055; Schwartz (Altria) Tr. 1871 ("There was a lot of urgency for [Altria] to be able to play in that [pod-based] space.").

311. Normally, commercializing a product can take a year or more. (Schwartz (Altria) Tr. 1870).

312. Nu Mark originally targeted a May/June 2018 launch for Elite. Altria's management asked the Nu Mark team if it could "do better." The operations team developed plans to accelerate the launch from May to February 2018. (PX1647 (Altria) at 004-005; Schwartz (Altria) Tr. 1870-71).

313. Altria brought Elite to market with "[e]xceptional speed[,]" with only a four-month period between obtaining the exclusive rights to Elite and its retail launch. (PX1113 (Altria) at 027).

314. Based on the assumptions in Nu Mark's 2017 three-year strategic plan, prepared in February 2017, Nu Mark had predicted that it would likely lose $33 million in 2018 and then break even in 2019. (RX0746 (Altria) at 007; Gifford (Altria) Tr. 2728).

315. Nu Mark's 2018 three-year strategic plan, presented to Altria's Board of Directors in February 2018 ("Nu Mark's 2018 three-year strategic plan"), depended heavily on Nu Mark's having successful pod-based products. Nu Mark hoped to sell 11 million units of pod products in 2018 and, anticipated that by 2019, pod products would account for the majority of its volume, while cig-a-like volume rapidly declined. The plan further assumed that, with strong pod sales, Nu Mark's overall sales volume would grow by between 20 to 30 percent year over year. (PX4012 (Altria) at 009-10; Begley (Altria) Tr. 1085-88; *see also* Gifford (Altria) Tr. 2739 (The 2018 projections included Nu Mark's hopes that the launch of Elite would bolster the company's financial viability.)).

316. Based on the assumptions in Nu Mark's 2018 three-year strategic plan, Nu Mark projected it would lose $70 million in 2018, followed by a $24 million loss in 2019, before hopefully turning a profit in 2020. (PX4012 (Altria) at 010; Gifford (Altria) Tr. 2736-37).

317. Nu Mark's 2018 three-year strategic plan explained to Altria's Board of Directors that "Elite's primary benefit [was a] feeling of vapor fullness on the inhale/exhale combined with good tasting flavors" and the "[p]rimary drawbacks for some include lack of nicotine satisfaction[.]" (PX4012 (Altria) at 023; *see also* PX1260 (Altria) at 001 ("Fundamentally, Juul appeals to those seeking a cigarette experience, whereas MarkTen Elite provides a full inhalation, vaping experience" and consumers appeared to be favoring the experience offered by JUUL)).

3. Prelaunch Home Use Tests

318. While Nu Mark's operations team was scaling up manufacturing and preparing its distribution network to receive Elite, Nu Mark's consumer research team undertook to learn more about the pod-based products Altria had just bought (Cync and Elite). (PX4075 (Altria) at 001; RX2015 (Altria) at 001).

319. Nu Mark's general practice for many of its new products was to conduct an extended home use test ("HUT"), in which participants are paid to take the product home, use it for several weeks, and provide feedback. (Begley (Altria) Tr. 1097-98; Jupe, Tr. 2247). Nu Mark viewed the results of a home use test as an indication of whether a product might be successful in the marketplace. (Begley (Altria) Tr. 1098; *see also* PX7014 (Baculis (Altria) Dep. at 300-01)).

320. Home use tests are not necessarily predictive of market success. "[T]he test at the end of the day is what people are buying at retail." (Jupe (Altria) Tr. 2247-48; *see also* Begley (Altria) Tr. 1098 (Retail sales is where to "get the best learnings in terms of how appealing [a] product [is] to consumers[.]"); PX7023 (Fernandez (Altria) Dep. at 155-56) (While the results of home use tests are "indicators," manufacturers "get the real answer

in the marketplace[.]"); PX7014 (Baculis (Altria) Dep. at 300-01) ("A home use test could give you an indication that a product might be successful in the market, but it is not really very predictive.")).

321. Beginning in late 2017, Nu Mark ran HUTs on three different products: Elite, Cync, and JUUL. (RX2015 (Altria) at 004). The preliminary results showed that, over a three-week period, the purchase intent for Elite remained steady, at 43 percent, and was higher than that of JUUL. (PX4075 (Altria) at 001). Nu Mark viewed this result as an encouraging initial sign. (Begley (Altria) Tr. 986-89; PX4075 (Altria) at 001).

322. For those home use test participants who had not used a vapor product within the last seven days, meaning those who were "predominantly cigarette smokers," the purchase intent for Elite was lower than that for JUUL. (RX2015 (Altria) at 010; Jupe (Altria) Tr. 2250-51).

323. For those home use test participants who had not used a vapor product in the last seven days, meaning those who were "predominantly cigarette smokers," the data showed that users began replacing cigarette smoking sessions with JUUL immediately, in numbers that were statistically significant. The data did not show users replacing smoking sessions with Elite until five or six days into the study and the numbers were not statistically significant. (RX0496 (Altria) at 019; Jupe (Altria) Tr. 2250-53).

324. The fact that cigarette smokers in Altria's home use tests did not replace smoking sessions with Elite until five or six days into the study time means that a pack-a-day smoker "would have to buy 35 pods and continue using them for five weeks" before they might determine that they can change from cigarettes to e-vapor, which is unlikely. (Jupe (Altria) Tr. 2253 (Consumers "don't go and buy 35 new products. The first [purchase] is going to tell you what you are going to need to know[.]")).

325. The other pod-based product in Nu Mark's portfolio, Cync, showed the lowest propensity to replace cigarettes in Altria's home use tests, with cigarette usage occasions remaining relatively constant throughout the study. (RX0496 (Altria) at 019).

326. Although Nu Mark ran the Elite home use test for six weeks, it ran the JUUL home use test for just three weeks because Nu Mark could not find enough JUUL product on the market to continue the test. The products were "sold out." (Jupe (Altria) Tr. 2248-49; *see also* Begley (Altria) Tr. 1098-99).

327. A January 2018 report regarding Altria's home use testing of Elite, Cync, and JUUL, prepared by Altria's Consumer & Marketplace Insights team summarized, "Cync & Elite provide different product experiences than that provided by JUUL[], and therefore the products show strong performance among different [adult smoker and vaper] audiences. JUUL provides a more 'familiar cigarette-like experience' and demonstrates immediacy in replacing cigarette usage occasions among . . . those who are still predominantly smoking cigarettes[]. Cync & Elite provide more 'non-traditional vaping experiences'

and demonstrate higher usage among . . . those who are more familiar with e-vapor product usage." (RX2015 (Altria) at 007).

328. The results of Altria's home use testing indicated to the head of Altria's consumer research division, Pascal Fernandez, that Elite "didn't perform as well towards th[o]se consumers who were looking for [the] smoking sensation"; and that Elite was "not converting" those consumers. (PX7023 (Fernandez (Altria) Dep. at 25-26, 153-55)).

4. Elite Launch and Promotions

329. On February 26, 2018, Altria launched MarkTen Elite, Nu Mark's first pod-based product. (O'Hara (JLI) Tr. 631-32 (discussing PX2086 (JLI) at 001); Willard (Altria) Tr. 1356-57). "The Elite product was on the market under a different name and sold prior to [the Deeming Rule date of] August 8, 2016 . . . ." (PX0015 (Altria) at 008).

330. Altria's launch of Elite was well-funded because the company wanted to get Elite out on the market as quickly and effectively as possible. (Willard (Altria) Tr. 1356-57).

331. The efforts of the sales force responsible for selling Elite to expand distribution resulted in Elite's placement in "tens of thousands of stores." (Willard (Altria) Tr. 1296-97). The sales force was able to get Elite into over 90 percent of the stores that it targeted. (Myers (Altria) Tr. 3323).

332. Nu Mark expanded distribution of Elite from over 6,000 stores in the first quarter of 2018 to more than 23,000 stores by the end of the second quarter. (PX9047 (Altria) at 003). By the fourth quarter of 2018, Elite had reached 25,000 stores. (PX7004 (Willard (Altria) IHT at 204)).

333. Shortly after Elite's launch in February 2018, Altria also launched its Innovative Tobacco Products ("ITP") program, which consolidated e-vapor products in a designated location at retail stores and provided Altria with shelf space at the top of retail fixtures. (Begley (Altria) Tr. 1005-07; RX1240 (Altria) at 001; *see also* Farrell (NJOY) Tr. 331; Crozier (Sheetz) Tr. 1522-24).

334. Over the course of 2018, Altria spent over $100 million on the Nu Mark ITP program. (Quigley (Altria) Tr. 1982; PX7003 (Quigley (Altria) IHT at 47-49)). This was a significant investment in Nu Mark. (Quigley (Altria) Tr. 1951).

335. Altria invested in significant promotions to sell Elite. (PX7023 (Fernandez (Altria) Dep. at 78-79) ("[Altria had] very attractive promotional offers to give really good value . . . – low price to the consumer."); Myers (Altria) Tr. 3336-37 (describing various discounts and other promotions for Elite); Crozier (Sheetz) Tr. 1512 ("Altria basically had Elite on promotion the entire time it was in Sheetz stores."); Myers (Altria) Tr. 3316 (testifying that Altria's sales force "put[] any resource [it] could" into the rollout of Elite).

336. The goal of the promotions was to incentivize a "trial" – to get consumers to try the device in the hope that they would return for cartridges (pods), akin to the razor/razor blade model. (Crozier (Sheetz) Tr. 1510; *see also* Myers (Altria) Tr. 3331).

337. Among the promotions that Nu Mark ran for Elite was a "Buy a Device, Get a Pod for Free" promotion. Because the Manufacturer Suggested Retail Price ("MSRP") for the Elite devices was $19.99 and the MSRP for the Elite pod packs was $8.99, the consumer got roughly $30 of value for just $19.99. This was considered "a pretty aggressive offer – to get the initial trial for the product." (Myers (Altria) Tr. 3319-20; RX2052 (Altria) at 003); Myers (Altria) Tr. 3319-20).

338. The $19.99 promotion referred to in F. 337 "wasn't seeming to get people to purchase." Nu Mark decided to expand the promotion in June 2018, but reduced the bundle price to $8.99. (Myers (Altria) Tr. 3323-24, 3331; PX1229 (Altria) at 021; *see also* Gifford (Altria) Tr. 2753-56 (describing promotions, including $8.99 trial offer, clerk incentive program, signage, direct mailings, retail intercepts, and events in Las Vegas, Nevada)).

339. The $8.99 bundle promotion (F. 338), because it included the battery device plus any pod pack, was in essence giving the battery device away "for free." (Begley (Altria) Tr. 1115; *see also* Myers (Altria) Tr. 3333 ("[W]e were basically giving the device away for free . . . .").

340. The $8.99 bundle promotion (F. 338) was "an aggressive offer." (Quigley (Altria) Tr. 2055; *see also* Crozier (Sheetz) Tr. 1512 (agreeing the $8.99 promotion was "pretty rich"); Myers (Altria) Tr. 3332 (characterizing the $8.99 offer as "even more aggressive" than the $19.99 promotion)).

341. Nu Mark offered coupons for $10-off Elite and instituted a store intercept program where Altria employees physically went to stores and handed out coupons to consumers. Because the coupons could be used together with the device bundle promotion, a consumer using both could get both the pod and the battery device for free. (Myers (Altria) Tr. 3333-36; PX1229 (Altria) at 021).

342. Nu Mark instituted a clerk incentive program. If a clerk at a store sold 25 devices, they could get $500 for the employees at the store, which was "a big deal." Nu Mark did not pay out the incentive very often. (Myers (Altria) Tr. 3335-36; PX1229 (Altria) at 021).

343. The promotions referenced in F. 337-342 were fully funded by Nu Mark, not the retailer. Nu Mark would pay the retailer the difference between the list and promotional price either "after the promotion or monthly." (Crozier (Sheetz) Tr. 1505-06, 1513; *see also* Myers (Altria) Tr. 3335 (confirming the operating company bears the cost of the promotions)).

344. In addition to the $100 million that Altria spent on the ITP program (F. 334), Nu Mark spent $76 million in marketing and sales expenditures in 2018. (PX1072 (Altria) at 010; Quigley (Altria) Tr. 1982).

345. Where promotions worked to incentivize some sales, ending the promotion tended to substantially decrease sales. (Crozier (Sheetz) Tr. 1539-40 (confirming that, in his experience, after a device promotion ended, there was a significant drop off in sales); PX7038 (Myers (Altria) Dep. at 183-84) (Altria found that as soon as a promotion was "turned . . . off, the sales dropped and [Nu Mark was] quickly scrambling to try to get it turned back on.")).

346. Altria promotions worked to incentivize some consumers to try Elite; however, those consumers did not return to purchase additional pods to use with the device. For example, the $8.99 bundle promotion for a device and any pod (F. 338) ran at retailer Sheetz from May 20, 2018 until September 30, 2018, which lead to a spike in device sales at Sheetz. However, there was no corresponding rise in sales of pods. (Crozier (Sheetz) Tr. 1513-15; RX1135; RX1136).

347. Pod sales are an important indicator of future product success because they show that the consumer is continuing to use the product. (Crozier (Sheetz) Tr. 1515; *see also* PX7019 (Crozier (Sheetz) Dep. at 58) ("Cartridge sales are important because it shows there's through-put with the consumer. So they buy the device and then keep coming back to, you know, buy the pods together with the device, as opposed to just buying the device once and whether it came with pods or not, the [purchases of] pods show that the person is still using the device.")).

5. Sales Performance of Elite

348. Elite's promotions did not result in the increase in subsequent pod sales that Altria hoped to see. (Myers (Altria) Tr. 3384-85 (discussing pod sales at 7-Eleven); Crozier (Sheetz) Tr. 1514-15; PX7019 (Crozier (Sheetz) Dep. at 77-78) (discussing the "pretty big drop-off" in sales when an Elite promotion was stopped); *see also* PX7038 Myers (Altria) Dep. at 176 ("[W]e see it getting some initial trial, but we're not seeing it convert into pod sales. Maybe pods grew a pod a week or something like that, but that is not where they would set the bar at for a successful new product launch. They were looking for a really strong growth line on the pod side of it.")).

349. Altria found that due to its promotions and distribution pushes, Elite was generating some trial by consumers, but buying a two-pack of pods on a trial offer does not generate "very much volume." Altria was "hoping [consumers would] try [Elite] and [would] say this is great, and [then] go out and buy a pack a couple of times a week. That drives volume. [But Altria] never convinced the consumer, after their initial trial, to become a repeat purchaser." (Willard (Altria) Tr. 1367-68; PX9047 (Altria) at 003, 009).

350. "To be successful in the e-vapor marketplace, it's not enough just to have the resources of a large tobacco company, you also have to have a product that's attractive to consumers and that can clear the regulatory hurdles." (PX7012 (Eldridge (ITG Brands) Dep. at 161); *see also* Huckabee (Reynolds) Tr. 429 (agreeing that price promotions will not help if consumers do not like a product); PX7030 (Wexler (Turning Point Brands) Dep. at 105)

("If people don't like the product, they're not going to buy the product," no matter what you do.); PX7037 (Huckabee (Reynolds) Dep. at 82) (agreeing that if a product is "suboptimal" that will "impact the repurchase of the product for consumers")).

351. To Altria, Elite's performance was "nothing compared to what you would expect when you're trying to disrupt the consumer and trying to get a consolidated group of consumers to engage with the brand . . . ." (Gifford (Altria) Tr. 2755).

352. After its first eight weeks, Elite was selling 7.2 pods per week per Sheetz store; with two pods to a pack, that translates to "roughly a pack sold every other day." (Begley (Altria) Tr. 1112-13 (discussing PX1229 (Altria) at 019)). In May 2018, Nu Mark was selling just one Elite pack every other day in Sheetz. (PX1229 (Altria) at 019; *see also* Begley (Altria) Tr. 1113; PX7022 (Begley (Altria) Dep. at 248-49)).

353. 7-Eleven is Altria's largest retailer, "both from a business contribution and from a total retail store standpoint on the convenience [store] side." (Myers (Altria) Tr. 3307).

354. By June 2018, more than half of 7-Eleven stores carrying Elite "had yet to sell a single pod." (PX7044 (Stout (7-Eleven) Dep. at 137)).

355. By the week of July 16, 2018, following the $8.99 bundle promotion offering a free battery device (F. 338), 8,109 battery units were sold across the roughly 8,000 7-Eleven stores then selling the product, an average of just one device per store per week, which Scott Myers, then Vice President of Altria's western region, where 7-Eleven is headquartered (Myers (Altria) Tr. 3307) and presently the President and CEO of Altria Group Distribution Company ("AGDC"), termed "poor performance." (Myers (Altria) Tr. 3352-55 (discussing RX2051)).

356. As of the first week of August 2018, Elite was being sold in 7,971 7-Eleven stores. Of those stores, 4,800 sold a battery device. Myers, the head of AGDC, explained this was "really bad. . . . [A] chain their size with the visibility and awareness, it just shows that consumers aren't interested in buying this product." (Myers (Altria) Tr. 3357-58).

357. At 7-Eleven, if sales of Elite products failed to reach their preset selling threshold within four to six weeks, the chain's inventory management system automatically would put the product into "uncarried" status and stop reordering Elite. A product losing "carried" status is "a really early indicator that . . . it's not selling." (Myers (Altria) Tr. 3321-22; *see also* 3336, 3345-46 (testifying that losing carried status is "a very bad sign")).

358. In June and July 2018, Elite fell out of "carried" status at "[a] lot" of 7-Eleven stores because of insufficient sales. (Myers (Altria) Tr. 3336, *see also* 3345-46 (testifying as to a "summer battle" of trying to "get [Elite] back into carried status")).

359. Only about 20 percent of 7-Eleven stores were reordering Elite after the first four to six weeks after its launch. (PX7038 (Myers (Altria) Dep. at 206-07)).

360. As of August 17, 2018, Altria had "55 weeks of inventory" in Elite, which is "over a year of inventory" in warehouses. That represents money "being tied up in something that's not moving, much like for [Altria's] retail customers when [product is] just sitting on a shelf." This was a "bad sign." (Myers (Altria) Tr. 3363-65; PX4239 (Altria) at 004).

361. By the summer of 2018, Altria was undertaking efforts for Elite that it had not had to undertake for prior new product launches. It had to "guarantee the product so that if it went out of date or [stores] didn't sell it," Altria "would take it back." It "had to cover things like restocking fees [for] their wholesaler if they did have to sell it back or return it back." It had to have salespeople "stand in a store and intercept consumers to show [its] commitment to try to gain trial." It had to keep promotions running to demonstrate to retailers that Altria "would at least get them trials so they didn't have any real risk around the inventory investment they were going to make to carry [the] product." (PX7038 (Myers (Altria) Dep. at 130-31); *see also* Myers (Altria) Tr. 3316, 3330-31).

362. Elite was the "worst" performing product rollout that Myers worked on in his 24 years of experience with Altria. (Myers (Altria) Tr. 3366; PX7038 (Myers (Altria) Dep. at 12)).

363. Myers explained that there are two "moments of truth" for consumers – when they see the product in the store and decide whether to make a purchase, and then "when they take it out of the package and use the product." (Myers (Altria) Tr. 3329). Altria's sales force could "roll it out and get it everywhere in position," *i.e.*, "create good conditions for the first moment," but Elite was not winning the second part, after the consumer took it home and used the product. (Myers (Altria) Tr. 3329-30, 3366-67).

364. Based on Dr. Murphy's analysis of projected IRI data (F. 173), Elite's share of all closed system cartridge unit sales never exceeded 1%. (RX1217 (Murphy Expert Report at 008-09 ¶ 12)).

365. On July 26, 2018, Willard notified investors on an earnings call that Nu Mark's sales volume had grown by approximately 16% in the second quarter of 2018 and 23% for the first half. Willard stated that the growth was "primarily driven by expanded distribution[,]" explaining that "[m]ost recently, Nu Mark expanded MarkTen Elite from over 6,000 stores in the first quarter to more than 23,000 stores by the end of the second quarter." Willard further explained that Elite and MarkTen Bold were "[t]he drivers of the growth in second quarter and first half" and were "getting traction with consumers, albeit in the shadow of a product that's growing much more quickly." (Willard (Altria) Tr. 1167-68 (discussing PX9047 (Altria) at 003, 009-10 (Altria's Q2 2018 Earnings Call)).

366. From May 2018 to late July 2018, Elite's average sales per week per store in Walgreens had increased from 0.2 units to 0.5 units, which is a total of two units per month. In 7-Eleven, they increased from 1.7 units per week to 4.4 units per week, which is less than one sale per day. In Wawa, they increased from 2.4 units to 6.4 units, which is less than one sale per day. (PX1013 (Altria) at 007).

367. Over the six-week period from May 20, 2018 to June 24, 2018, sales of Elite grew week over week by 1.4 percent, 16.5 percent, 25 percent, 77.9 percent, 17.7 percent, and 8.2 percent, respectively. (PX2616 (JLI) at 009). This indicated that "growth was inconsistent and decelerating, especially towards the end, and overall sales were quite low." (O'Hara (JLI) Tr. 560).

368. "Marginal contribution" is the price less the variable cost to get to margin. It is a measure that excludes fixed costs and overhead, such as "fixed-manufacturing expense, marketing, sales, and any allocated costs that are used to support the business." (Gifford (Altria) Tr. 2724; PX7040 (Gifford (Altria) Dep. at 98)).

369. As of July 2018, Elite had a 38 percent year-to-date positive marginal contribution, excluding distribution costs, such as the ITP promotional program. As of September 2018, when distribution costs were included, Nu Mark's total marginal contribution was $3 million below target and $15 million less than the previous year. (PX1056 (Altria) at 008 (Nu Mark Brand Update, Aug. 2018); PX1127 at 003).

370. Elite's same-store sales slowed in the third quarter of 2018. While same-store sales had increased by 56 percent from May to July 2018, from July through September 2018, growth increased by 38 percent. (PX1056 (Altria) at 033; PX1072 (Altria) at 004).

371. Over the 21-week period after Elite's launch, from March 11, 2018 through July 29, 2018, Elite's average weekly sales volume increased steadily, with a sharper increase after the introduction of the Elite $8.99 promotion in June 2018 (F. 338). Distribution of Elite similarly expanded during this time period to a total of 24,000 stores. As of July 29, 2018, 90,645 units had been sold, or less than four units per store per week. (PX1056 (Altria) at 012, 015 (Nu Mark Brand Update, Aug. 2018)).

372. Elite grew in sales volume after its launch as distribution expanded and price discounting encouraged people to try it. (Quigley (Altria) Tr. 1945). Nu Mark's promotions were expensive and not financially sustainable. (PX7013 (Brace (Altria) Dep. at 83-84)).

373. Though Elite was able to "get[] initial traction with consumers[,] largely because of expanded distribution and promotional offers[,]" this "limited success . . . was substantially less than [JUUL,] the leading product in the marketplace." (Willard (Altria) Tr. 1386-87; *see also* PX9047 (Altria) at 009-10 (July 26, 2018 Altria Q2 2018 Earnings Call)).

374. The success of a promotion can be determined within a few weeks, and for Elite, it appeared that the $8.99 promotion was not generating sufficient trials or repeat purchases. (Myers (Altria) Tr. 3345; *see also* Myers (Altria) Tr. 3313-14 (explaining that the retailers quickly know how a product is performing based on "the data they're seeing" and "what they're hearing from their store managers")).

375. As of October 15, 2018, Altria had sold 4.9 million units of pod products. (PX1127 (Altria) at 004).

J. Problems with Nu Mark's Products

1. Design Issues with Elite

376. The term Elite 1.0 refers to the version of Elite that had been on the market prior to

August 8, 2016, and which was acquired and commercially sold by Altria beginning in February 2018. (Jupe (Altria) Tr. 2134).

377. Nu Mark decided to pursue a PMTA for Elite 1.0 on March 15, 2018. (PX4318 (Altria) at 007; Quigley (Altria) Tr. 1977).

378. Altria believed that the PMTA for the in-market Elite product faced "[i]ncreased application risk" and an "[u]ncertain authorization outcome." (RX0496 (Altria) at 011; Murillo (Altria/JLI) Tr. 2942 ("[F]rom the first day [Altria] got [Elite], [it] knew that there were a number of changes that were likely going to be necessary ultimately for both consumer and regulatory purposes . . . .")).

379. Altria pursued a PMTA for the in-market Elite while it worked on redesigning the product to have the "must have" features that Altria believed were necessary for PMTA approval. (RX0496 (Altria) at 010-015, 017; *see also* PX7017 (Magness (Altria) Dep. at 101-03)).

380. Elite lacked dry puff prevention technology. (F. 411).

381. Elite contained nickel wire, which was "very concerning" and something about which Altria "needed long-term studies to definitively understand whether it was a risk or not." (Gardner (Altria) Tr. 2663-64).

382. Elite's "black parts" were "made out of ABS plastic." (PX7026 (Gardner (Altria) Dep. at 89-90)). "The A, the B and the S all represent [harmful or potentially harmful constituents] that are toxic, and if there's any impurities in the manufacturing process, they could be released into the liquid and aerosol and expose the smokers." (PX7026 (Gardner (Altria) Dep. at 90); Gardner (Altria) Tr. 2614).

383. Elite's pod "was made of polycarbonate," which has "some toxicity in fish studies, not in humans[,]" but nonetheless, "has a lot of science stigma around it." (PX7026 (Gardner (Altria) Dep. at 90)).

384. Elite's e-liquid formulations were not developed by Altria and thus "were not developed to use [Altria's] toolbox of ingredients for e-vapor formulations," meaning that they were not made with ingredients for which Altria "had sufficient data that [it] felt was necessary for a PMTA." (PX7026 (Gardner (Altria) Dep. at 90-91)). For the non-toolbox ingredients, Altria "would have to do significant study, years of studies to demonstrate

they're appropriate for the protection of public health." (PX7026 (Gardner (Altria) Dep. at 91)).

385. Altria determined in early 2018 that a half-dozen components of Elite would need to be replaced, which led Altria to "conceptualize[]" a redesigned version of the product. (PX4025 (Altria) at 001; Murillo (Altria/JLI) Tr. 2942).

386. Elite 2.0 refers to a version of Elite that was to incorporate certain fixes to the version of Elite that had been on the market in 2018. (Jupe (Altria) Tr. 2134-35).

387. Altria never finalized the design of Elite 2.0 and it was never sold in the market. (Garnick (Altria) Tr. 1614).

388. The changes that were being contemplated for Elite 2.0 would require a PMTA, so the modified product could not be introduced on the market in advance of FDA approval. (Garnick (Altria) Tr. 1699-1700; *see also* Jupe (Altria) Tr. 2256-58 ("It first had to be obviously developed and designed and tested, the science approved by the FDA, get an authorization from the FDA, and then commercialize it, and . . . our best guess at that point was five to six years."); PX7014 (Baculis (Altria) Dep. at 150-52); PX7017 (Magness (Altria) Dep. at 108-12); PX1673 (Altria) at 013)).

389. In March 2018, Altria knew that "Elite, both the current version and the future version, need to be modified and redesigned, resulting in a delay in PMTA work and filing." (RX0270 (Altria) at 001).

390. To maximize the time for the FDA to review the Elite 2.0 PMTA, Altria's plan was to use the on-market Elite (Elite 1.0) as a placeholder filing: To "get the 1.0 [PMTA] in at the very last moment knowing that it was going to be an insufficient application and really just allow for that review time on the preferred version of the 2.0." (PX7017 (Magness (Altria) Dep. at 102-03)).

391. Nu Mark evaluated whether it could rely on some bridging (*see* F. 230) of Elite 1.0 to Elite 2.0 in any PMTA. Altria's plan for bridging from Elite 1.0 to Elite 2.0 was "conceptual" because the base scientific data was not done, as Elite 2.0 was not yet even designed. (PX7027 (Murillo (Altria/JLI) Dep. at 161-62)).

392. Nu Mark would not know whether the bridging plan for Elite 2.0 would work "until [it] did years' worth of work." (PX7041 (Quigley (Altria) Dep. at 152)).

393. As of June 2018, Nu Mark estimated that it would take until the first quarter of 2022 to file a PMTA on Elite 2.0. (RX0450 (Altria) at 069).

2. Dry Puffing

394. Dry puffing is a phenomenon that occurs when a closed system's cartridge begins to run out of e-liquid at the end of its life. The remaining e-liquid overheats, which results in the

generation of aldehydes, particularly formaldehyde. (Jupe (Altria) Tr. 2237, 2303-04; PX7015 (Gogova (Altria) Dep. at 90-91); PX4149 (Altria) at 033; King (PMI) Tr. 2351-52).

395. Aldehydes are a class of compounds, with formaldehyde being the most common and the simplest. Formaldehyde is the particular compound "most likely to increase with thermal decomposition." Altria sometimes used the terms "aldehyde" and "formaldehyde" interchangeably. (Gardner (Altria) Tr. 2574-76).

396. Formaldehyde is a carcinogen. (Gardner (Altria) Tr. 2562; Willard (Altria) Tr. 1423).

397. Although the FDA has not specified a numerical level for formaldehyde that is acceptable for e-vapor products, there must be a showing of reduced risk compared to conventional cigarettes, and it would be difficult to demonstrate risk reduction if the levels of formaldehyde in the e-vapor product were similar to cigarettes. (Gardner (Altria) Tr. 2666-67).

a. Cig-a-likes and Dry Puffing

398. Prior to October 2017, Altria tested its MarkTen cig-a-like (which contains a battery known as BVR 2.3) (PX1011 (Altria) at 020; Gardner (Altria) Tr. 2572) for formaldehyde exposure using an "intense" puffing regime, which it believed to be the "conservative" testing approach. Under "intense" puffing conditions, the MarkTen cig-a-like generated "very low formaldehyde levels." (PX7000 (Garnick (Altria) Dep. at 122-23); Gardner (Altria) Tr. 2673 (noting "intense" puffing regime involves 140 puffs); *see also* RX0817 (Altria) at 010-11).

399. Sometime after the testing referenced in F. 398, in late 2017, Altria conducted additional testing of its MarkTen cig-a-likes in connection with research being done for the PMTA for the MarkTen cig-a-likes. In testing for formaldehyde exposure, this research used a non-intense, or moderate, puffing regime, which Altria found to be more consistent with how the product was actually being used in the market. Under these testing conditions, with the exception of one flavored variety, MarkTen cig-a-like's formaldehyde yields through the life of the cartridge "were higher than expected and higher than other products in the market," and "were similar to a cigarette." (PX7000 (Garnick (Altria) Dep. at 122-23); Gardner (Altria) Tr. 2569-70; RX0817 (Altria) at 012-13; *see also* PX1247 (Altria) at 009 (chart showing MarkTen cig-a-likes' formaldehyde levels exceeding Vuse e-vapor products, Blu, and Juul)).

400. Dry puffing does not present an acute health risk. However, the discovery of dry puffing with the MarkTen cig-a-like did create a regulatory concern within Altria as to whether the dry puffing issue would hinder Altria's ability to obtain FDA approval for the MarkTen cig-a-like. (Jupe (Altria) Tr. 2237-38; *see also* PX7027 (Murillo (Altria/JLI) Dep. at 115) (testifying that dry puffing represented a "tremendous risk" for the MarkTen cig-a-like PMTA)).

401. By March 2018, Altria determined that fixing the MarkTen cig-a-like's dry puff issue would require "fairly significant . . . changes" to be made to the product, and that Altria would therefore have to delay its planned PMTA filing pending these changes. As of March 2018, Altria's regulatory group described the status as "delayed – date TBD." (Murillo (Altria/JLI) Tr. 2937-38; RX0630 (Altria) at 019).

402. In June 2018, Altria developed an electronic component for dry puff prevention that shut off the battery once it reached a certain temperature, to avoid overheating. This also meant the device would shut off and "stop working during that puff." (Garnick (Altria) Tr. 1601-02, 1635; Gardner (Altria) Tr. 2576-77).

403. The revised MarkTen battery containing dry puff prevention technology referenced in F. 402 was known as BVR 2.8. (Garnick (Altria) Tr. 1601-02, 1635; Gardner (Altria) Tr. 2570-71, 2576-77; PX7000 (Garnick (Altria) IHT at 122-23)).

404. JLI's method for dry puff prevention was temperature control, *i.e.*, to control the power to the heater to maintain a certain temperature throughout the puff. Gardner, Altria's Senior Principal Scientist, analogized Altria's approach to an older computer's heat regulation system – when the computer processor overheated, it would simply turn off; while JUUL's "closed-loop temperature control," which will still generate aerosol, but with reduced power delivery, was more like a modern computer – when the processor gets too hot, it slows down but continues to work. (Gardner (Altria) Tr. 2576-77).

405. Altria's early studies of the BVR 2.8 battery showed that it successfully reduced formaldehyde levels. (Gardner (Altria) Tr. 2571-72).

406. Early in the process of developing the BVR 2.8 battery, Altria's scientists discovered that "[w]ith the dry puff prevention electronics, . . . the cartridges needed to be heat-treated" – a process called "annealing" – "in order for the dry puff prevention technology to work appropriately." (Gardner (Altria) Tr. 2573-74).

407. There was full agreement within Altria that Nu Mark would need to go through the PMTA process before it could sell MarkTen cig-a-likes with the BVR 2.8 battery. (Garnick (Altria) Tr. 1726 ("There was no doubt that that would require preapproval by the FDA.")). "Changing the electronics would be a product change, [which] required premarket approval from the agency." (Gardner (Altria) Tr. 2570).

408. As of June 18, 2018, none of Altria's scientists thought Altria could get a PMTA on the MarkTen cig-a-like product that was then on the market because it did not have dry-puff prevention. (Garnick (Altria) Tr. 1726-27; *see also* Gardner (Altria) Tr. 2593-95; Jupe (Altria) Tr. 2236-38 (listing dry puffing among the "problems with [the cig-a-like] that compromised [Altria's] ability to get it through" the FDA's PMTA process); PX1890 (Altria) at 001-02; PX1028 (Altria) at 005-06).

409. The technical problems contributed to delays in 2018 in the timeline for PMTA submission for the MarkTen cig-a-like then on the market (the "BVR 2.3 Version").

(Gardner (Altria) Tr. 2577; Jupe (Altria) Tr. 2321; *see also* Gardner (Altria) Tr. 2584-85 (explaining that design issues required the company to restart the stability studies required for the PMTA)).

410. To save time on completing a PMTA for the MarkTen cig-a-like with the BVR 2.8 battery (the "BVR 2.8 Version"), Altria wanted to use the PMTA research already done on the BVR 2.3 Version by bridging – "building a bridge from the prior data to a new product." (Gardner (Altria) Tr. 2572; *see also* F. 230). If Altria could demonstrate that the BVR 2.3 Version and the BVR 2.8 Version "behaved the same in delivering an aerosol," then Altria could use the toxicology, clinical, and behavior studies already completed for the PMTA for the BVR 2.3 Version for the PMTA for the BVR 2.8 Version. (Gardner (Altria) Tr. 2572-73). The bridging plan would add 12 to 18 months to the PMTA timeline. (Gardner (Altria) Tr. 2570).

b. Elite and Dry Puffing

411. When Altria acquired rights to commercialize Elite in the fall of 2017, Elite "didn't have dry puff [prevention]." Therefore, Elite had the potential for formaldehyde generation, as did other e-vapor products without the prevention technology. (Jupe (Altria) Tr. 2305-06; *see also* PX7017 (Magness (Altria) Dep. at 104) ("Elite . . . was missing the temperature control feature that [Altria] had come to deeply appreciate was critical to reducing formation of certain constituents that are of concern, including formaldehyde[.]"); Gardner (Altria) Tr. 2562-63).

412. Initial scientific testing of Elite's formulations conducted in December 2017 indicated that some "devices delivered low aerosol mass and high formaldehyde results." (RX0825 (Altria) at 001).

3. Conversion Potential

413. Conversion potential is the potential of an e-vapor product to convert adult smokers away from combustible cigarettes and is one factor that the FDA has indicated it will consider in connection with PMTA approval of e-vapor products. (Gardner (Altria) Tr. 2586-87, 2640; Willard (Altria) Tr. 1421-22).

414. Market share is a measure of sales percentage relative to competitors. "[M]arket share tells you . . . what the adult smokers are actually doing in the market with their money." "[T]hat piece of data, combined with other information, is used to assess the conversion potential of the product." (Gardner (Altria) Tr. 2644-45).

415. "[A] low sales rate or sales volume" is an indication that the product does not have the potential to convert smokers. "If consumers don't like [a product], they're not going to convert." (Gardner (Altria) Tr. 2648).

416. PMI interpreted the low market shares held by Altria as an indication that Altria's e-vapor products were not successful in converting smokers. (PX7020 (King (PMI) Dep. at 246-47)).

417. Altria's consumer research cast doubt on the conversion potential of Nu Mark's products. (Jupe (Altria) Tr. 2234, 2251-53; F. 418-420).

418. Home use test (HUT) results from January 2018 (F. 321) indicated that Elite and Cync did not offer the necessary nicotine satisfaction for cigarette users, with Cync demonstrating no meaningful impact at all on the number of occasions of cigarette use ("cigarette occasions") and Elite showing negligible effect until over a month into the study, long after the average consumer would have rejected the product. (Jupe (Altria) Tr. 2251-53; RX0496 (Altria) at 019).

419. In the spring of 2018, Nu Mark re-analyzed the HUT data from January 2018. Instead of analyzing participants based on whether they had used an e-vapor product within the last week, Altria's consumer research team analyzed the results based on whether the participants had indicated they were seeking a cigarette experience or a vaping experience. Analyzed in this way, neither Cync nor Elite had any meaningful impact on cigarette occasions. JUUL was the only product among the three that was "taking cigarette occasions from those who [were] seeking a cigarette experience." (PX1225 (Altria) at 001, 037).

420. Jennifer Schmidt, the market researcher responsible for analyzing the HUT data for Altria explained, "Elite [and] Cync . . . are more for those seeking the vaping experience than the smoking experience. JUUL tends to have the most behavioral impact among those seeking the smoking experience[.]" (PX1225 (Altria) at 001).

421. Apex had no nicotine salts (*see* F. 431-433), and low nicotine concentration, making it "hard to see" how it would be "effective at conversion." (Murillo (Altria/JLI) Tr. 2960; Begley (Altria) Tr. 1082-83; *see also* PX7023 (Fernandez (Altria) Dep. at 197) (explaining that Apex did not "satisf[y] versus the smokers' requirements"); RX0532 (Altria) at 011 ("[l]ow" conversion potential due to "minimal nicotine satisfaction")).

422. In July 2018, Paige Magness, then Managing Director of Regulatory Affairs for Altria and responsible for PMTA submissions, wrote that the regulatory "team need[ed] to recommend which projects should move forward and which should not, based on conversion potential and satisfaction." (RX0788 (Altria) at 002). Magness concluded that "none of [Altria's] products [were] anywhere near ready (still concepts, formulations not decided, no data to know if we can make a successful PMTA)." (RX0788 (Altria) at 001; *see also* PX1028 (Altria) at 006-07 (comparing MarkTen products with those of competing brands and demonstrating that MarkTen and Elite both had a lower nicotine content and higher pH than both JUUL and Reynolds' Vuse cig-a-like product)).

423. MarkTen cig-a-like "fell short [of the PMTA standard] on risk reduction and conversion. . . . With regard to adult smoker conversion, this [was] a product with a relatively low

nicotine concentration and [it] did not have the presence of acids that would have improved the level of satisfaction." (PX7017 (Magness (Altria) Dep. at 290-91)).

424. Many "smokers who want[] to convert to non-combustible tobacco products d[o] not want to appear to be smoking a cigarette," which makes the form of a cig-a-like "just wrong for conversion." (PX7036 (Garnick (Altria) Dep. at 134-35); *see also* O'Hara (JLI) Tr. 624-25 (explaining that a cigarette shape "isn't ideal for people that are trying to switch from cigarettes"); PX7033 (O'Hara (JLI) Dep. at 191-92) ("[Cig-a-likes] generally were not . . . a strong form factor for converting smokers.")).

425. The "[c]onversion potential [of MarkTen cig-a-like] was weak." (Jupe (Altria) Tr. 2304-05; PX7024 (Crosthwaite (Altria/JLI) Dep. at 213-14) (Cig-a-likes have not "demonstrated [conversion] potential.")). *See also* Willard (Altria) Tr. 1421-22 (MarkTen cig-a-like "wasn't having any success in the marketplace in converting adult cigarette smokers.").

426. "MarkTen Elite did not have high conversion potential. It had insufficient nicotine satisfaction due to the absence of nicotine – due to the absence of nicotine salts." (Gardner (Altria) Tr. 2594-95). "MarkTen Elite didn't have the nicotine experience necessary to satisfy consumers coming in from the cigarette category[.]" (Gifford (Altria) Tr. 2779). Elite "didn't deliver the nicotine satisfaction that adult smokers were looking for to lead to conversion." (Begley (Altria) Tr. 1096-97).

427. "The problem we were having is the consumer[s] who intended to buy [Elite] were more likely to be dual users and were not converting, or there was very little evidence of conversion and the product really sticking." (PX7023 (Fernandez (Altria) Dep. at 78-79)). Elite just "didn't satisfy to the extent it needed to satisfy" to convert smokers. (PX7023 (Fernandez (Altria) Dep. at 152)).

428. PMI, which was watching the U.S. e-vapor industry evolve from abroad and had launched some of Altria's products in international markets, concluded that none of Nu Mark's products were successful at converting smokers. (King (PMI) Tr. 2431-32, 2502). Martin King, then CEO of PMI Americas, testified that this conclusion was based on "the actual results in the marketplace and the fact that [Altria] never achieved very . . . significant market shares." (King (PMI) Tr. 2503).

429. JLI believed that Nu Mark's products were not successful at converting smokers. (*See, e.g.*, RX1420 (JLI), PX2269 (JLI)). JLI's cofounder, Adam Bowen, observed that Elite "do[es]n't provide cig-like nicotine satisfaction" and believed MarkTen "Bold is a terrible product – they didn't get it right." (RX1420 (JLI) at 001; PX2269 (JLI) at 001). Bob Robbins, JLI's Chief Growth Officer, testified that cig-a-likes did not "deliver[] the nicotine satisfaction that a smoker would want to convert[.]" (Robbins (JLI) Tr. 3244). Elite "didn't seem to be effective at converting cigarette smokers[.]" (Robbins (JLI) Tr. 3251).

430. Altria saw in the data from scientists and analyst reports "that JUUL was effective at

converting smokers" and Altria viewed JUUL as "the most . . . effective, noncombustible product on the market to convert smokers[.]" (Garnick (Altria) Tr. 1771; Gifford (Altria) Tr. 2828 ("[T]he outside world was clearly seeing – and this was an independent survey done by [market analysts] – that JUUL was very successful in converting adult smokers, [and was] impacting brands across the cigarette space.")).

4. Nicotine Salts

a. Function of Nicotine Salts

431. The addition of organic acids to a nicotine solution produces "nicotine salts." (Jupe (Altria) Tr. 2229; PX4504 (Altria) at 009, 024).

432. The addition of nicotine salts brings down the pH (a measure of acidity) of the nicotine in the e-liquid. (Gardner (Altria) Tr. 2600-01). The pH measure serves as a proxy for how nicotine is delivered to the lungs because "the more acid you added, the lower the pH of the liquid, and . . . the more nicotine salt would be created." (Quigley (Altria) Tr. 2006; *see also* Jupe (Altria) Tr. 2269 ("The salts influence the pH. The right level of salts take the pH down . . . ."")). By introducing an acid to nicotine to make nicotine salts, the pH level starts to approach the level of a combustible cigarette. (Jupe (Altria) Tr. 2138-39).

433. Nicotine salts are intended to mimic the nicotine that comes from heating and burning leaf tobacco. (O'Hara (JLI) Tr. 547). Nicotine salts deliver nicotine "deeper into the lungs," (Gardner (Altria) Tr. 3086-87), and offer a "smoking experience very similar to conventional cigarettes." (PX7015 (Gogova (Altria) Dep. at 120); *see also* PX2158 (JLI) at 036 (explaining that nicotine salts "allow[] for a nicotine absorption rate that closely matches that of a comparative traditional cigarette"); PX2168 (JLI) at 011).

434. By the summer of 2018, Altria's scientists believed that nicotine salts were necessary for nicotine satisfaction, and that nicotine salts could mimic the cigarette experience only if they were used in the correct ratio. (Jupe (Altria) Tr. 2142, 2229; PX4504 (Altria) at 009, 024).

435. Altria's understanding of nicotine salts evolved gradually over time. (F. 436-444).

436. Altria's scientists understood that nicotine salts were important for "abating some of the irritation in the throat" caused by nicotine. (Jupe (Altria) Tr. 2139, 2229-30; *see also* PX4504 (Altria) at 009 (explaining that salts "[m]odulat[e] . . . harshness")).

437. Altria's scientists had hypothesized that nicotine salts were important to nicotine satisfaction, but "didn't have the data" to support that hypothesis. (PX7015 (Gogova (Altria) Dep. at 310-12)). Until 2018, because of safety and other concerns, Altria's scientists were not permitted to run consumer tests with nicotine salts in sufficient concentrations, which limited their ability to develop effective nicotine salt formulations. (PX7034 (Mountjoy (Altria) Dep. at 64-66); PX7015 (Gogova (Altria) Dep. at 133-37, 310-13)).

438. When Altria's scientists were able to conduct testing of nicotine salts in sufficient concentrations, the results led in the summer of 2018 to what Altria's scientists termed a "eureka moment." (Jupe (Altria) Tr. 2142).

439. Altria's scientists discovered in June 2018 that, in addition to mitigating the harshness of nicotine in the throat, nicotine salts created nicotine absorption most similar to how the nicotine in a cigarette is absorbed. (Jupe (Altria) Tr. 2137-39; PX4504 (Altria) at 009; RX0526 (Altria) at 006).

440. By June 2018, Altria's scientists discovered that without nicotine salts, the nicotine in aerosolized e-vapor is largely in the gas phase, and such nicotine escapes into the mouth and throat before it can be absorbed in the lungs. (Jupe (Altria) Tr. 2270-71; RX0796 (Altria) at 039; PX7015 (Gogova (Altria) Dep. at 40-42)). The addition of nicotine salts serves to keep more of the nicotine in the particulate phase and thus enables it to reach the lungs. (Jupe (Altria) Tr. 2138, 2270-71; Quigley (Altria) Tr. 2005-06; RX0796 (Altria) at 039; PX7015 (Gogova (Altria) Dep. at 40-42)). *See also* PX7015 (Gogova (Altria) Dep. at 42) ("[I]f you are really looking for immediate nicotine satisfaction and replacement of conventional cigarettes, the easiest way would be [to] provide the adult smokers with similar nicotine release profile as a conventional cigarette, and this cannot be achieved truly without the acids to create nicotine salts technology.").

441. In the summer of 2018, Altria's scientists reached a consensus that the "[u]se of nicotine salts or addition of acids to achieve a certain pH is required for a satisfying and relaxing E-vapor experience." (Jupe (Altria) Tr. 2275; RX0796 (Altria) at 053; PX4504 (Altria) at 024; *see also* Gardner (Altria) Tr. 2585-86 ("The consensus was that nicotine salts would be required for adult smoker conversion to e-vapor products."); RX0419 (Altria) at 001-02; RX0526 (Altria) at 006).

442. Altria's goal was to add enough acid to "adjust the pH of an aerosol from an e-vapor product" so that it would match as closely as possible the pH of a cigarette and "replicate the nicotine satisfaction experience [of smoking] . . . in an e-cigarette." (Quigley (Altria) Tr. 2005-06; *see also* Jupe (Altria) Tr. 2270; Murillo (Altria/JLI) Tr. 3051-52).

443. Altria's scientists determined that a 4:3 ratio of nicotine to organic acids was the "most appropriate ratio." (Jupe (Altria) Tr. 2136-37).

444. These realizations led Altria's scientists to take the position that "[a]ll newly developed e-vapor products, regardless of nicotine content, should utilize nicotine salt technology." (Jupe (Altria) Tr. 2275; RX0796 (Altria) at 053).

b. Elite Did Not Have Nicotine Salts

445. Elite did not contain nicotine salts and had a low nicotine content. (Willard (Altria) Tr. 1357).

446. When Joseph O'Hara, JLI's Director of Regulatory Strategy, realized that Elite did not have nicotine salts, he "did not expect that [Elite] would be a particularly strong competitor," especially because it had "low nicotine content" and "no salts." (O'Hara (JLI) Tr. 631-32) discussing PX2086 (JLI) at 001 (February 26, 2018 email providing "summary of our views on the launch of MarkTen Elite this morning. Net takeaway is that we believe the MarkTen Elite is a meaningful positive for us relative to expectations based on (1) low nicotine content pods, (2) no salts, and (3) lack of marketing roll-out."). (PX2086 (JLI) at 001).

447. When Bowen, one of JLI's cofounders, realized Elite was not using salts, he concluded that Elite could not "provide cig-like nicotine satisfaction" and thus was "not a threat." (RX1420 (JLI) at 001; *see also* RX1421 (JLI) at 001). This defect made Elite "an absolute nonstarter" in his view. (PX2269 (JLI) at 001).

448. Because Elite lacked nicotine salts, its e-liquid pH was too high to mimic that of a cigarette and caused a "significant amount of nicotine loss." (RX0419 (Altria) at 001).

449. The level of pH is measured on a logarithmic scale. "[A] one-unit difference in pH – for example, from 7 to 8 – is a tenfold difference in the acidity level or the acid level." (Gardner (Altria) Tr. 2600-01).

450. The pH of Elite was approximately 9. (RX2036 (Altria) at 005; *see also* PX1028 (Altria) at 006). The pH of a Marlboro cigarette is around 5.8. (RX2036 (Altria) at 005; RX0796 (Altria) at 037; RX0429 (Altria) at 004).

451. Altria's scientists believed that Elite's high pH was "not ideal for conversion" of adult cigarette smokers to e-vapor. (PX1028 (Altria) at 001).

452. Elite's lack of nicotine salts meant that virtually none of the nicotine in the vapor was being delivered to the lung in the way it would be delivered in a cigarette. (Jupe (Altria) Tr. 2272-75; RX0796 (Altria) at 050; *see also* Schwartz (Altria) Tr. 1920-21 ("[Elite's] vapor delivery system was inefficient in the sense that that vapor stream in the absence of salts was not getting to the lower lung and up into the bloodstream . . . .")).

453. In the spring of 2018, Altria scientists ran a denuder tube study to test the role of nicotine salts. A "denuder tube" was "a very long tube" into which a "cigarette was puffed." (Jupe (Altria) Tr. 2272). E-vapor products were then puffed into the same tube, and the goal was to get the aerosol to "come out of the tube just like the cigarette [smoke] does." (Jupe (Altria) Tr. 2272-73). This was "a good proximate of how the lung is receiving nicotine." (Jupe (Altria) Tr. 2273).

454. Altria's scientists presented the results of the denuder tube study to Altria's consumer research team in May 2018. (RX0796 (Altria) at 001; Jupe (Altria) Tr. 2145-46). A tested product with 4.5 percent nicotine by weight and no acid was "pretty close to where Elite was" and the study showed that it was delivering almost no nicotine to the lung. (RX0796 (Altria) at 050; Jupe (Altria) Tr. 2272-75).

455. As Jupe testified, Elite "was not a product that we found to be satisfying, and in our opinion – my opinion, especially – we didn't think this was going to be a product that was going to convert or switch smokers, because it lacked that nicotine satisfaction that really you can only ascertain through the introduction of salts." (Jupe (Altria) Tr. 2153-54).

456. Nu Mark's "best guess" for how long it would take to create the right nicotine salts formula, submit a PMTA on that formula, and receive FDA approval to commercialize the new product "was five to six years." (Jupe (Altria) Tr. 2256).

457. As a result of Elite's lack of salts, Jupe came to believe by the summer of 2018 that "Elite, as it was, was not the product [Altria] needed in [its] portfolio." (Jupe (Altria) Tr. 2155-56).

c. MarkTen Bold with Nicotine Salts

458. Unlike the other MarkTen cig-a-likes, MarkTen Bold had nicotine salts. In February 2018, while addressing investors, Willard stated, "MarkTen Bold, which is currently in about 25,000 retail stores, uses a proprietary recipe of nicotine salts, with 4% nicotine by weight to deliver a differentiated sensory experience and nicotine satisfaction, approaching that of cigarettes." (PX2176 (JLI) at 110).

459. By the summer of 2018, Altria believed that MarkTen Bold did not have the correct nicotine salts formula. (Quigley (Altria) Tr. 2037-38; Jupe (Altria) Tr. 2230-33; PX7016 (Jupe (Altria) Dep. at 107-08)).

460. As Jupe explained, the "addition of nicotine salts" was just "part of" what was required for nicotine satisfaction. (Jupe (Altria) Tr. 2136-37). "The second part of it is having the right level of nicotine salts to the right level of nicotine." (Jupe (Altria) Tr. 2137).

461. MarkTen Bold had 4 percent nicotine by weight and 1 percent acid. (Jupe (Altria) Tr. 2228-29; PX7015 (Gogova (Altria) Dep. at 137-38); RX2036 (Altria) at 005). JUUL came in a 5 percent nicotine by weight and 4 percent acid (leading to the creation of nicotine salts). (RX0796 (Altria) at 050; *see also* Jupe (Altria) Tr. 2273-74).

462. MarkTen Bold had a pH of 8, while the pH of a Marlboro cigarette is around 5.8. (RX2036 (Altria) at 005; RX0796 (Altria) at 037; RX0429 (Altria) at 004).

463. MarkTen Bold's high pH meant that it was losing approximately half of its nicotine into the mouth and throat region. (Jupe (Altria) Tr. 2274 (discussing RX0796 (Altria) at 50); *see also* RX0526 (Altria) at 016; Jupe (Altria) Tr. 2274 (explaining that a product "pretty close" to MarkTen Bold's nicotine by weight, with the same amount of acid, was "losing 60 percent of its nicotine into the mouth and throat region, not getting to the lung")).

464. The salts ratio in MarkTen Bold was "the best [Altria] knew" in 2016 when the formulation was created, "but it wasn't enough salt. It just was not satisfying." (Jupe (Altria) Tr. 2228-29).

465. Pharmacokinetic (PK) models, referred to as "PK curves," are used to measure how nicotine is delivered to the body. (Jupe (Altria) Tr. 2231-33, 2270).

466. To generate a PK curve, blood is drawn from a test subject, and nicotine levels are measured in the blood over time. The curve generated from the results of this testing depicts the way that nicotine is delivered to and maintained in the bloodstream. (Jupe (Altria) Tr. 2231-33).

467. A comparison of a cigarette's PK curve to that of an e-vapor product "is a surrogate . . . for cigarette satisfaction or nicotine satisfaction." (Jupe (Altria) Tr. 2231-32).

468. A smoker trying MarkTen Bold would have to take anywhere from "25 to 30 puffs to really get closer" to the nicotine satisfaction of a "conventional cigarette." That is "too much additional work for adult smokers to do" to "get closer to where they wanted to be" with MarkTen Bold. (PX7015 (Gogova (Altria) Dep. at 144-46)). In that situation, the smoker would just start "looking for potentially other alternatives" that do not require working as hard or using the product as much. (PX7015 (Gogova (Altria) Dep. at 144-46)).

d. Assessment of Need for Nicotine Salts

469. In June 2018, Quigley revised Nu Mark's vision and mission statements to focus on "switching" smokers. (Quigley (Altria) Tr. 2013-14; RX0371 (Altria) at 018). Quigley believed that if Nu Mark was going to succeed, it had to find a way to "ensure that the nicotine experience [was] going to be what it need[ed] to be to get a smoker to put down a pack of cigarettes and move to an e-cigarette product." (Quigley (Altria) Tr. 2014).

470. Quigley began meeting with Altria's scientists, including Dr. Gerd Kobal, to familiarize himself with what the scientists had learned about nicotine salts and to discuss the path forward. (Jupe (Altria) Tr. 2265-67).

471. Dr. Kobal was an Altria scientist who ran the company's "sensomics department," which studied "the senses and interaction with [Altria's] products" and worked on product development within Altria's Regulatory Sciences division. (Quigley (Altria) Tr. 2005; Jupe (Altria) Tr. 2217).

472. Dr. Kobal's work involved extensive research on nicotine salts. The research showed that "the products that were in the [Nu Mark] portfolio, the products that were being worked on, [and] the products that were on the shelf were inadequate to achieve this goal of converting smokers." (Jupe (Altria) Tr. 2279).

473. Dr. Kobal's analysis of nicotine salts in JUUL showed that JUUL possessed an optimal formulation of nicotine salts, allowing it to mimic the nicotine delivery of a cigarette. (Jupe (Altria) Tr. 2265-68, 2271-74; Gardner (Altria) Tr. 3086-87).

474. Dr. Kobal and other Altria scientists informed Quigley in June 2018 of their view on the necessity of nicotine salts. (Quigley (Altria) Tr. 2005-08; RX0419 (Altria) at 002; *see also* PX4504 (Altria) at 024).

475. When Quigley learned of this view, he had what he called an "aha" moment. (Quigley (Altria) Tr. 2076; *see also* Quigley (Altria) Tr. 2029 (agreeing that discovery of the necessity of nicotine salts was the "eureka" moment he and Dr. Kobal had in early June)). Dr. Kobal showed Quigley the market comparison of the pH of all e-vapor products, which illustrated that none of Nu Mark's products "had enough acid to have the pH to be similar to a cigarette." (Quigley (Altria) Tr. 2007).

476. Quigley learned from Kobal and Jupe that there were other features desired in an e-vapor product, but "at the end of the day, if you didn't have the immediate nicotine satisfaction, you would not be successful." (Quigley (Altria) Tr. 2012-13; *see also* PX4504 (Altria) at 024; RX0419 (Altria) at 002). As Quigley explained at the Level Setting Meeting (F. 548), drawing on his experience "work[ing] in the diaper business," he came to understand that an e-vapor product that does not deliver nicotine satisfaction is like a diaper that leaks – it does not do its job. (Quigley (Altria) Tr. 2015-16 ("[Y]ou could add velcro tabs and you can make them pull up and make them more comfortable, but if your diaper is leaking, no one is going to come back and buy your diaper.")).

477. After meetings with Dr. Kobal (F. 470-476), Quigley "felt like [he] had learned something that was . . . the most foundational thing about [Nu Mark]," and it gave him "the foundation to know . . . the problem with all of [Nu Mark's] products," and "what [Nu Mark] had to do to build a plan." (Quigley (Altria) Tr. 2008).

478. Once Altria realized the importance of nicotine salts, Altria had to determine what type of acid (acetic, lactic, or benzoic) to use and the optimal ratio of those acids in combination with the right ratio of nicotine. (Jupe (Altria) Tr. 2139-40).

479. To improve its nicotine salt formulations, Altria would also have to test the "flavor system interacting with the acids, interacting with the nicotine." (Jupe (Altria) Tr. 2147). "There's a whole stability of the flavor system. The flavor system now has to be designed to co-exist with the acids because you do get some negative taste aspects of the acids." (PX7016 (Jupe (Altria) Dep. at 332-33)).

480. To improve its nicotine salt formulations, Altria would have to determine that the salts formula used would not "degrade" the components in the product. "[The] flavor system has to survive within the pod, within a packed-down environment for at least six months to a year, such that it doesn't interact with the metals. Amino acids, obviously interact with metals. They interact with plastics." (PX7016 (Jupe (Altria) Dep. at 332-34)).

481. To improve its nicotine salt formulations, Altria would also need to put the salts formula in a format that could be delivered by aerosol. (PX7016 (Jupe (Altria) Dep. at 334)).

482. Altria believed that if nicotine salts were added to its e-vapor formula, it would be considered a new product for purposes of the Deeming Rule, which, in order to be sold on the market, would first require authorization from the FDA through a PMTA. (Jupe (Altria) Tr. 2230, 2256; Murillo (JLI/Altria) Tr. 2927-28, 3069; Begley (Altria) Tr. 1081; PX7026 (Gardner (Altria) Dep. at 41-42).

5. Leaking Issues with Elite

483. Altria was aware before launching Elite that there was a problem with the pods leaking. Some within Altria deemed the leaking to be at a manageable level, although those in Nu Mark's operations division felt the level was unacceptable. There was "a lot of tension in terms of wanting to get the product out." While Elite had "issues," it was the only pod-based product Altria had that could be put into the market consistent with the Deeming Rule. (Schwartz (Altria) Tr. 1881-83; PX4129).

484. Although leaking was common to many pod-based e-cigarettes, leaking issues "were certainly worse with some [products] than others." (PX7033 (O'Hara (JLI) Dep. at 90-91)).

485. Altria had not expected to have a leaking problem with Elite that was as significant as it was. (Begley (Altria) Tr. 1126; PX7022 (Begley (Altria) Dep. at 231)).

486. One study referenced in an April 2018 internal Nu Mark e-vapor update showed that at times, over 40 percent of Elite's pods leaked. (RX0547 (Altria) at 007). Elite's level of leaking at launch was "unacceptably high." (Willard (Altria) Tr. 1298; *see also* Willard (Altria) Tr. 1295; Schwartz (Altria) Tr. 1880-81 (discussing PX4129 (Altria) and describing Elite's level of leaking as "unacceptable").

487. JLI's Joseph O'Hara, Director of Regulatory Strategy, recalled that, the day Elite launched, he ordered "a large number of samples" "and when those samples arrived to [him], every single one of those samples was leaking in the packaging, as well as whenever [he] tried to use them, they would then leak . . . in [his] mouth." (PX7033 (O'Hara (JLI) Dep. at 192). *See also id* at 78 ("The overall product quality was also very poor. There was a lot of leaking of the pods in the packaging, in the device, out of the pods while you were consuming it."); O'Hara (JLI) Tr. 548 (In O'Hara's experience, Elite "pods were uniquely leaky, unlike just about any other product" he had ever seen")).

488. A consumer opening an Elite package "would see literally fluid inside the pod in the package . . . . And in some cases, the leaking was so bad" it could be seen "on the outside of the carton" that had been used to ship the products to the retail store. (Myers (Altria) Tr. 3324).

489. In March 2018, an Altria document reported that two employees and two other individuals purchased eleven packs of Elite products and that of those packs, seven had at least one pod that leaked, and leaked more than a couple of drops. The document reported that three of the four people that purchased the Elite "also reported liquid dripping into their mouths when using the product." (PX4083 (Altria) at 003).

490. In comparison with other pod products, Elite's leaking was "much more pervasive." (Myers (Altria) Tr. 3324-25).

491. In JLI's consumer studies, leaking was "a top feature of MarkTen Elite." (O'Hara (JLI) Tr. 639).

492. Altria received complaints from consumers and retailers regarding Elite's leaking pods. (Willard (Altria) Tr. 1309; PX7014 (Baculis (Altria) Dep. at 179-80); *see also* PX4129 (Altria) (March 22, 2018 email from Craig Schwartz assuring sales representative that there was a "concerted effort afoot to address" the leaking issue and asking that he "continue to share any and all MarkTen Elite product quality feedback . . .); Schwartz (Altria) Tr. 1880-81 (discussing PX4129 (Altria)).

493. Retailers of Elite notified Altria of complaints from customers about leaking, and retailers' frustration with customers "taking their frustration out on them when [the leaking] was really [Nu Mark's] problem." (Begley (Altria) Tr. 1103-04; *see also* Myers (Altria) Tr. 3324-25 (explaining that Elite's retailers notified Altria of consumers upset by leaking issues and complaining to clerks, and inquired what Altria was going to do to rectify the issue).

494. Wholesalers and retailers such as McLane Services (Altria's largest wholesale distributor) and 7-Eleven (the largest retail convenience store in the United States) had "gone to great lengths operationally" to get Elite into stores "and to have it be defective out the gate, they were pretty upset." (Myers (Altria) Tr. 3324-25, 3327; Begley (Altria) Tr. 1101; *see also* PX4083 (Altria) at 001 (Myers promising to "keep McLane and 7-Eleven calm" regarding the leaking)).

495. First impressions of a product are important and Elite's leaking was unhelpful in trying to get Elite "off the ground." (PX7022 (Begley (Altria) Dep. at 232) ("[Y]ou don't get many bites at the apple. And so to have [leaking] as a prevalent issue in the marketplace is terribly unhelpful as you're trying to get a new brand off the ground."); PX7012 (Eldridge (ITG Brands) Dep. at 147)).

496. "[I]t's hard to undo [consumers'] first perception of the brand." (Begley (Altria) Tr. 1104; *see also* Myers (Altria) Tr. 3328-29 ("[T]o launch a new product and then . . . the consumer uses the product for the first time and find it had leakage in it, you know, [retailers] were really concerned that we were – you know, big misstep here."); PX7037 Huckabee (Reynolds) Dep. at 81 ("[P]od leakage [is] a very primary constraint. If the pods aren't themselves functioning properly, you won't have promotional effectiveness[.]")).

497. If a consumer purchases a product that "leaks heavily . . . they aren't likely to repurchase that product." (PX7037 (Huckabee (Reynolds) Dep. at 82-83)).

498. Consumers were "turned off by the fact" that Elite pods were leaking. (Willard (Altria) Tr. 1297).

499. Elite's leaking issue "impacted [Altria's] expansion plans for MarkTen Elite[;] as long as [Elite's] pods were leaking, it was hard [for Altria] to expand the product." (Schwartz (Altria) Tr. 1905-06).

500. JUUL was the market leader and Elite needed to be "that much better than the competition to dislodge [consumers] from their choice" of product. (PX7018 (Schwartz (Altria) Dep. at 152-53); Schwartz (Altria) Tr. 1889-90 ("It's very hard to dislodge a consumer who's very content with JUUL if I give them a product that's leaking.")).

501. By July 12, 2018, JLI concluded that Elite's "[e]xcessive leakage ha[d] significantly (perhaps irreparably) damaged the brand[.]" (RX1165 (JLI) at 004; *see also* Myers (Altria) Tr. 3328-29 (agreeing he "certainly felt [the leaking] had" damaged the brand)).

502. Altria determined that in large part, the leaking problem with Elite was due to "a leaking gasket. When pressures changed, whether that was in shipping or in the distribution system, it would cause the liquid to come out of the pod." (Begley (Altria) Tr. 1102-03).

503. Over time, Altria came up with multiple ways to address the problem of leaking pods. (Willard (Altria) Tr. 1294-96).

504. Some of the earliest fixes were manufacturing changes. (Willard (Altria) Tr. 1294-95). As Willard explained at trial, Elite was manufactured by hand in China, and it took time for newly hired employees to learn how to assemble the device properly. (Willard (Altria) Tr. 1294-95; *see also* RX0547 (Altria) at 006)). "[W]hen they learned how to do it well, the leaking went down dramatically." (Willard (Altria) Tr. 1295).

505. Nu Mark also experimented with "chang[ing] the shipping from China so that pods were shipped in a different position," (Willard (Altria) Tr. 1309), as well as shipping the pods in blister packs and without caps over the cartridge. (RX0547 (Altria) at 007).

506. By March 2018, a series of quick fixes, such as those in F. 504-505, had reduced Elite's leaking. (PX4129 (Altria) (showing improvement in leaking)).

507. By June 8, 2018, Nu Mark developed a new gasket that it believed would fix the leaking associated with Elite and began planning for "production [of] MarkTen Elite with the New Gasket[.]" (Schwartz (Altria) Tr. 1895-96 (discussing PX1579 (Altria)).

508. Nu Mark believed that a replacement gasket would take the leaking "from mostly fixed to even more fixed, and the Nu Mark team proposed that as a solution at the time." (Willard

(Altria) Tr. 1295-96; *see also* Willard (Altria) Tr. 1303 ("I was told by the Nu Mark team that they had made substantial progress with a focus on improving their manufacturing process, but they felt that they could make further progress by making this gasket fix.")).

509. The replacement gasket was called the c1A gasket. (Garnick (Altria) Tr. 1622; Schwartz (Altria) Tr. 1898; Gardner (Altria) Tr. 2664).

510. Testing on the c1A gasket demonstrated that it further improved, but did not entirely resolve, Elite's leaking. (PX1556 (Altria) at 002; PX1560 (Altria) at 002; Schwartz (Altria) Tr. 1901-02; 1908-10; Gardner (Altria) Tr. 2664; PX7016 (Jupe (Altria) Dep. at 121-22); PX7026 (Gardner (Altria) Dep. at 187-88)).

511. Altria maintained a "Change Management Team" or "CMT" to review proposed e-cigarette product changes and determine whether the changes compromised the status of the product under the FDA's Deeming Rules. (Schwartz (Altria) Tr. 1891-93). After the proposed change goes through this committee, "if it's a risky issue, if it requires upper management, it then goes to the leadership team and goes to Howard [Willard, Altria's CEO]." (Garnick (Altria) Tr. 1801-02).

512. The MarkTen Elite gasket change was submitted to Altria's Change Management Team. (PX7003 (Quigley (Altria) IHT at 77)).

513. On August 10, 2018, Willard approved the production of Elite with the c1A gasket. (Schwartz (Altria) Tr. 1904 (discussing PX1582 (Altria) at 002); PX7027 (Murillo (Altria/JLI) Dep. at 165-66); PX7036 (Garnick (Altria) Dep. at 142-43)).

514. After approving the production of Elite with the new gasket, and after further discussions, Willard reversed his approval, and decided that the new gasket should not be implemented due to the regulatory risk it might create. (Willard (Altria) Tr. 1309-11, 1313-14, 1317-19; *see also* Garnick (Altria) Tr. 1636).

515. Willard's reversal as to implementation of the gasket change notwithstanding, the gasket change was implemented. (Schwartz (Altria) Tr. 1904-05). Units of Elite with the c1A gasket were introduced to the U.S. market, "[f]irst through e-commerce . . . probably late August/early September [2018, and then in retail] probably . . . mid-September, late September [2018]." (Schwartz (Altria) Tr. 1910-11).

516. As of October 22, 2018, Altria had converted its MarkTen Elite inventory network to the c1A gasket. (PX1567 (Altria) at 001).

517. The c1A gasket reduced, but did not eliminate, leaking in MarkTen Elite. (Gardner (Altria) Tr. 2664).

518. The c1A gasket was successful in reducing minimal and excessive leakage rates in Elite. (Schwartz (Altria) Tr. 1907-10 (discussing PX1560 (Altria) at 001-02)). In an email dated October 22, 2018, and titled "MarkTen Elite Complaint Summary (October 2018),"

Charles Epps, a quality technician who worked within the quality team at Nu Mark, reported that MarkTen Elite pods produced in production weeks 22 through 31, which were made without the new gasket, had "~35% Minimal Leakage Rate" and "~6% Excessive Leakage Rate," while MarkTen Elite pods produced in production weeks 34 and 35, which was after the c1A gasket change, had "0.6% Minimal Leakage Rate" and "0.2% Excessive Leakage Rate." (PX1560 (Altria) at 001-02).

519. Willard explained that Elite's issue with leaking "was not a primary factor in [Altria's] deciding to discontinue the product. I think by the time we got to the end of the summer [of 2018], the leaking problem, while still higher than we would like, had been dramatically reduced . . . ." (Willard (Altria) Tr. 1299).

520. The gasket change did not remedy Elite's lack of nicotine satisfaction. (Quigley (Altria) Tr. 1947-48, 2057-59; *see also* PX7041 (Quigley (Altria) Dep. at 153); PX7003 (Quigley (Altria) IHT at 118-19). By the summer and fall of 2018, retailers were less concerned about Elite's leaking and "more concerned about . . . the fact that it wasn't moving very quickly, and because it didn't have, in their mind, the right level of nicotine and nicotine salts." (PX7038 (Myers (Altria) Dep. at 86-87)).

K. Altria's Internal Assessments of Nu Mark and its Products

1. Internal Assessment of Nu Mark, Spring 2018

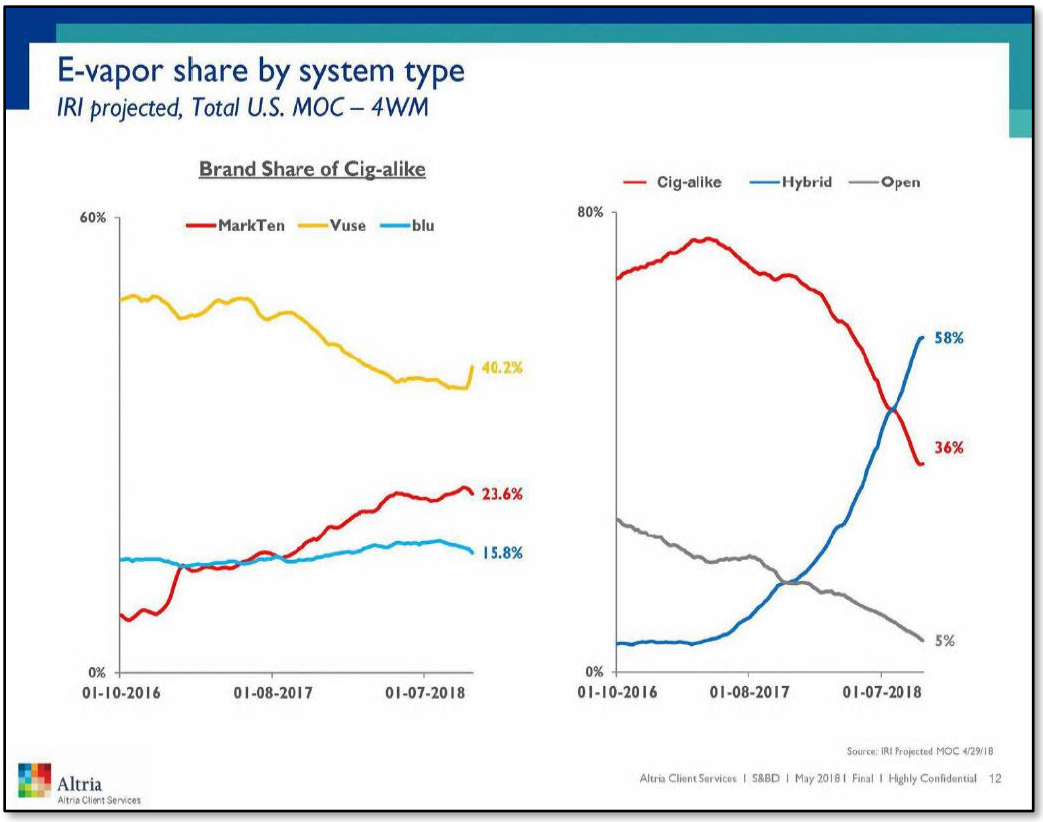
a. May 2018 Presentation to Altria's Board of Directors

521. In May 2018, Altria's management gave presentations to the Board of Directors on the state of the e-vapor category and Nu Mark's ability to compete in that market. (*See, e.g.*, PX1229 (Altria) at 001-02, 004-06, 011-24).

522. By May 2018, the e-vapor category was "growing faster than . . . anticipated" and "specifically what was driving that was pod-based products." (Begley (Altria) Tr. 1106; PX1229 (Altria) at 005). This growth was "the kind of growth [Altria] really hadn't seen from really any other reduced-risk product before," and "was almost completely driven by JUUL's growth." (Willard (Altria) Tr. 1363-64; *see also* Gifford (Altria) Tr. 2743-44; RX0272 (Altria) at 005).

523. The unprecedented rapid growth of pod-based products in general and JUUL in particular confirmed for Altria that its cig-a-like portfolio was not going to provide a path to leadership in the e-vapor category. (Begley (Altria) Tr. 1108 ("[W]e didn't know how the [e-vapor] category was going to shape up and where consumer preferences were going to land, so we thought placing multiple bets was appropriate. It turns out that the bet you really needed to make was a satisfying product that didn't look like a cigarette."); *see also* Willard (Altria) Tr. 1366 (In May 2018, "market share is in a free-fall for the category as a whole. So being the best cigalike when the category is in free-fall is not an opportunity for future profit.").

524. In May 2018, a presentation to the Board by Gifford and Begley included a slide that showed that from January 2016 to January 2018, the cig-a-like share in the e-vapor market was "plummeting," starting with a share of in excess of 70 percent, and ending with a share of 36 percent. (Willard (Altria) Tr. 1365-66; RX0272 (Altria) at 013):



(RX0272 (Altria) at 013).

525. In his May 2018 presentation to the Board, Begley expressed concern about the competitiveness of Nu Mark's pod-based product, Elite. As Begley informed the Board, Altria had realized by this point that "JUUL and MarkTen Elite appeal[ed] to different [adult tobacco consumer] audiences." (PX1229 (Altria) at 017). "JUUL appeals to [those] that are seeking a familiar cigarette-like experience while Elite appeals to [those] that are seeking a vaping experience." (PX1229 (Altria) at 017).

b. Corporate Restructuring in May 2018

526. In May 2018, Howard Willard became Altria's CEO. (PX9045 (Altria) at 001; Begley (Altria) Tr. 962).

527. Willard wanted Altria "to change [its] approach on innovation to have a better chance to fulfill [its] aspiration of being the U.S. . . . leader in noncombustible reduced-risk products." (Willard (Altria) Tr. 1372-73) (discussing RX0836 (Altria)).

528. In May 2018, Willard restructured Altria into "two divisions – core tobacco and innovative products." (RX0836 (Altria) at 001; *see also* Quigley (Altria) Tr. 1999-2000).

529. The goals of the restructuring of Altria in May 2018 were to "align" Altria's business units to the regulatory approach the FDA recently had announced, namely the continuum of risk between "combustible and noncombustible products"; "to rapidly transform [Altria's] product development capability"; "to turn around [its] e-vapor business"; (PX7003 Quigley (Altria) IHT at 25-26); and to overcome "the siloed nature of the way Altria did work[.]" (PX7034 (Mountjoy (Altria) Dep. at 93)).

530. As part of the May 2018 restructuring of Altria, to head the division focusing on innovative products, Willard appointed Brian Quigley, who previously had run U.S. Smokeless Tobacco Company, a subsidiary of Altria, to become the CEO of Nu Mark in May 2018. (RX0836 (Altria) at 002; *see also* Gifford (Altria) Tr. 2758-59; PX7031 (Willard (Altria) Dep. at 247-48)).

531. After appointing Quigley in May 2018 to lead the innovative products division, Willard asked Quigley to "go in and assess the strengths and, frankly, the weaknesses of the Nu Mark business and to make an assessment in his judgment on whether or not there were opportunities to make adjustments that would deliver greater success in the short run, and if success in the short run was a challenge, to identify what needed to happen over the longer term in order to have Nu Mark have more success." (Willard (Altria) Tr. 1373-74).

532. Willard believed that "[i]f there were opportunities to turn that business around, [Quigley] would likely be well positioned to identify them and, frankly, also if the business was as challenged as it seemed, . . . if he drew that conclusion, [then] that would be important feedback." (PX7031 (Willard (Altria) Dep. at 252)).

533. As part of Altria's annual planning process that typically would span the summer months (100 days) and culminate with a "game plan" to present at the Board meeting at the Ranch in the fall (F. 613), Quigley's role as the new head of Nu Mark was to assess the situation, envision a plan to fix the situation, and map out the work that needed to either be funded or decisions that needed to be made to activate that plan. (Quigley, Tr. 2018-19).

534. Quigley understood that he was taking over a business that was "struggling and underperforming," and that his "directive was to figure out what was wrong and to fix the business." (Quigley (Altria) Tr. 1941; *see also* Quigley (Altria) Tr. 2086 (agreeing that Willard had "charge[d] [him] with coming up with the best plan [he] could to turn around [Nu Mark]")).

535. Quigley met with his immediate team in his first week and concluded that they "did not yet fully understand what was wrong with the business." (Quigley (Altria) Tr. 2003-04, 2010-11; *see also* Quigley (Altria) Tr. 2003 (describing meeting with Nu Mark's leadership team as the "very first thing" he did)).

536. As part of Altria's corporate restructuring in May 2018, Willard appointed K.C. Crosthwaite as Chief Growth Officer and tasked him with "building and acquiring the competencies, technologies and talent [Altria would] need to achieve [its] innovative products aspiration." (RX0836 (Altria) at 002).

537. Because commercializing new products was contingent on FDA approval, in May 2018, Willard moved the Regulatory Sciences division to be under the supervision of Murray Garnick, Altria's General Counsel and head of Regulatory Affairs, in order to better align regulatory strategy with the scientific agenda. (RX0836 (Altria) at 003).

538. In connection with supervising Altria's Regulatory Sciences division, in May 2018, Garnick was tasked with learning "the belief . . . of the scientific experts about the potential for Nu Mark's products to ultimately get approved by the FDA." (Willard (Altria) Tr. 1374-75).

2. Internal Assessment of Nu Mark, Summer 2018

a. Garnick's Meetings with Scientists

539. Starting in June 2018, in his new role as head of Regulatory Sciences at Altria, Garnick began having "a series of meetings with the scientists" on a weekly basis to understand "what the problems were" with Nu Mark's e-vapor products. (Garnick (Altria) Tr. 1712; Jupe (Altria) Tr. 2265; *see also* Gardner (Altria) Tr. 2578-79, 2581; PX7036 (Garnick (Altria) Dep. at 69)).

540. Altria's scientists conveyed to Garnick the problems with the chemistry of Altria's e-vapor products, including the formaldehyde issue (F. 394-396, 398-399, 411-412). (Garnick (Altria) Tr. 1713, 2581).

541. In their meetings with Garnick, Gardner and the other Altria scientists advised Garnick that the consensus among the scientists was that the FDA would not approve any PMTA for Altria's products that were then on the market: "I was told that [Altria's] e-vapor products that were on the market would not get a PMTA. I was told that by [Altria's] scientists and I believed them. . . . In fact, I didn't think there was anyone on the science team who thought that they could get PMTAs." (PX7036 (Garnick (Altria) Dep. at 15)). A June 18, 2018 email from an Altria scientist to Garnick specifically advised that "no one thinks we can get a PMTA on current Mark Ten product[.]" (PX1890 (Altria) at 001; Garnick (Altria) Tr. 1725-27).

542. As a result of his meetings with the scientists in the summer of 2018, Garnick "developed a view that Altria should pull its e-vapor products from the market," although this view was "not shared by others at the time." (Garnick (Altria) Tr. 1583; *see also* PX7000 (Garnick (Altria) IHT at 101-02)). As Garnick explained, "it would cost a lot of money to create a new version [of each product] that would get a PMTA. And for every product, then, we would have to file two PMTAs, one to keep the current product on the market

and one to introduce a new product." (PX7036 Garnick (Altria) Dep. at 101-02)). In addition, "none of the products on the market were effective in converting smokers[.]" (PX7000 (Garnick (Altria) IHT at 101-02)).

b. June 18, 2018 Strategy Session

543. On June 18, 2018, Quigley held a daylong strategy session with his team at the innovative products division ("June 18 Strategy Session"). (RX1282 (Altria) at 001; RX0371 (Altria)).

544. The attendees at the June 18 Strategy Session included senior people from "every function that touched [Nu Mark's] business," such as marketing and manufacturing. (Quigley (Altria) Tr. 2009-11).

545. At the June 18 Strategy Session, Quigley wanted to "start to share with [the attendees] what [he] was learning and . . . how [he] was starting to think about the future and what we wanted to accomplish with [the Nu Mark] business[.]" (Quigley (Altria) Tr. 2011).

546. Quigley's presentation at the June 18 Strategy Session was "informed" by what he "had learned with Gerd [Kobal] and Richard [Jupe]," which was that Nu Mark "had to acknowledge, with the goal of getting smokers to switch," that "the most important thing that products had to deliver to them was an immediate nicotine experience." (Quigley (Altria) Tr. 2012-13; RX0371 (Altria) at 010). Quigley "wanted to make . . . clear to everybody" that "at the end of the day, if you didn't have the immediate nicotine satisfaction, you would not be successful." (Quigley (Altria) Tr. 2012-13).

547. Quigley felt that Nu Mark had not been "clearly articulating what was the goal with our business," and that it was "critically important that we had to agree . . . that our vapor business' job was to switch smokers[.]" (Quigley (Altria) Tr. 2014). "[W]hen you use the word 'switch,' what we are saying is, we have to ensure that the nicotine experience is going to be what it needs to be to get a smoker to put down a pack of cigarettes and move to an e-cigarette product." (Quigley (Altria) Tr. 2014).

c. Level Setting Meeting

548. On June 21 and 22, 2018, Altria's senior leadership convened for a broader organizational meeting referred to within Altria as a level setting meeting ("Level Setting Meeting"). (RX0221 (Altria) at 003, *see also* at 007 (listing attendees)).

549. Willard set up the Level Setting Meeting because he was new to the CEO role, and he wanted "to understand all of [Altria's] products, understand where [the company was] with them, so he could assess . . . and [the leadership] could all assess" where the company stood. (Quigley (Altria) Tr. 2019-20; *see also* Willard (Altria) Tr. 1375-76).

550. The Level Setting Meeting included the operating company presidents, numerous senior vice presidents and senior leaders, including vice presidents for product innovation and

regulatory affairs. Overall, there were "maybe 40 people in the room." (Quigley (Altria) Tr. 2021).

551. In his opening remarks at the Level Setting Meeting, Willard asked the group to "speak truthfully about the hard things" with regard to "the current situation," particularly Altria's "fundamental product and strategy gaps." (PX4205 (Altria) at 017). As Willard explained: "[W]e were really trying to understand what there was to be learned that could help us be more successful in the future." (Willard (Altria) Tr. 1376).

552. At the Level Setting Meeting, several presentations addressed the weakness of both Altria's innovative process and e-vapor product pipeline. Quigley began with a presentation highlighting the "[o]verarching [g]aps" in Nu Mark's existing e-vapor products. "Overarching gaps" identified in Nu Mark's product portfolio included a lack of "[c]lear understanding of how best to deliver nicotine satisfaction," a lack of "[c]lear understanding of how products map to" consumer desires, and the need for "[a]dditional foundational science . . . to ground product design." (RX0450 (Altria) at 024). As Willard explained, "gaps" is "a polite way of saying a weakness." (Willard (Altria) Tr. 1377-82).

553. At the Level Setting Meeting, Quigley explained to senior leadership the scientists' determination that nicotine salts are "required . . . to provide nicotine satisfaction to adult tobacco consumers." (Quigley (Altria) Tr. 2022-23, 2028-29; *see also* Jupe (Altria) Tr. 2287-88; RX0450 (Altria) at 024). Nu Mark needed to "[g]round all efforts in nicotine satisfaction first." (Quigley (Altria) Tr. 2022; *see also* RX0450 (Altria) at 021).

554. Quigley believed that it was "important [to] right size expectations for the current products," (RX0419 (Altria) at 002), given that "a consumer will not repurchase" a product that does not offer "immediate nicotine satisfaction." (PX7041 (Quigley (Altria) Dep. at 147)).

555. The takeaway from the Level Setting Meeting was that the leadership had "limited realistic confidence with [Nu Mark's] current portfolio." (Quigley (Altria) Tr. 2024 (discussing PX4205 (Altria) at 005)).

556. At the Level Setting Meeting, Quigley conveyed his belief that Altria and Nu Mark were not "structured appropriately" to develop innovative products. (Quigley (Altria) Tr. 2024-25). Quigley believed that the companies always "approached product development like a cigarette company" and "needed to think more like a technology company and have different capabilities and different processes[.]" (Quigley (Altria) Tr. 2025).

557. In Quigley's view, Altria had not been successful at innovating in the e-vapor space. Quigley did not think Altria was well-positioned to do so going forward. (Quigley (Altria) Tr. 2043).

558. In his presentation at the Level Setting Meeting, Jupe, Vice President of Product Development for Altria, highlighted a number of challenges facing Nu Mark's existing products (RX0450 (Altria) at 053):

- The pod product, Elite, would not be able to "compete successfully without higher level nicotine offerings" (RX0450 (Altria) at 068);

- MarkTen Bold needed a reformulated e-liquid capable of delivering nicotine satisfaction (RX0450 (Altria) at 065 (highlighting the need for "higher [nicotine by weight]" and "higher acids")); and

- The MarkTen cig-a-like's PMTA was contingent on a new battery to prevent dry puffing. (RX0450 (Altria) at 062-63).

559. The presentation from the regulation team at the Level Setting Meeting included as an option: "[c]ompletely re-set [Nu Mark's] product and filing plans." (RX0671 (Altria) at 004; *see also* RX0450 (Altria) at 051). Murillo, then Senior Vice President of Regulatory Affairs of Altria, "had no confidence in the current set of products and their [PMTA] filing plans, and it was a source of frustration, and [his presentation] was a somewhat perhaps unsuccessfully diplomatic way to convey to [his] colleagues that [the company] had to go back to the drawing board." (Murillo (Altria/JLI) Tr. 2949-50).

560. At the Level Setting Meeting, Murillo also urged the leadership to "[e]mbrace what it means to be regulated and be realistic about the FDA's approach." (RX0450 (Altria) at 051; *see also* Murillo (Altria/JLI) Tr. 2949-50 (discussing slide)). Murillo wanted to convey to his "colleagues on the executive team that we needed to go back to first principles, that we're a regulated company, and we can't just run around and throw products against the wall and see which ones stick and fix them later and all that stuff. We have to be realistic about the expectations that the FDA is setting forth with respect to these products." (Murillo (Altria/JLI) Tr. 2949; *see also* Murillo (Altria/JLI) Tr. 2948-49 (characterizing the enterprise as "running around like chickens with our heads cut off trying to find products in the vapor space that could be successful" and noting that "it wasn't going so well"); PX7015 (Gogova (Altria) Dep. at 102-03) (noting that the Nu Mark "business model [of] having as many products in the marketplace as possible" was not, from the scientists' perspective, "the right model to work under within the regulatory environment")).

561. Much of what was presented at the Level Setting Meeting was "new news" to Willard and the other executives in attendance. (Quigley (Altria) Tr. 2023; *see also* Garnick (Altria) Tr. 1727-28 (noting that before June 2018, Altria's leaders had not realized "that [Altria's] scientists believed that the MarkTen [cig-a-like] product would not get a PMTA" and "that in order to correct the problem" with the MarkTen cig-a-like, Altria "would need to get a PMTA first for the new product")).

562. Quigley recalled that at the end of the Level Setting Meeting, Willard "stood up and just said, this is a lot of information to process." (Quigley (Altria) Tr. 2023). Willard stated that the information provided "represented a fairly dire view of the likelihood of many of [Altria's] products getting FDA approval." (Willard (Altria) Tr. 1382-83; *see also*

Murillo (Altria/JLI) Tr. 2952 (describing discussion as "sobering" and recalling "some people were dismayed")).

563. Willard did not believe that the PMTA risks communicated to him by his team at the Level Setting Meeting were manufactured or exaggerated. (Willard (Altria) Tr. 1382).

d. Nu Mark Portfolio Assessment

564. During his presentation at the June 21, 2018 Level Setting Meeting, Quigley announced the creation of a cross-functional team to be led by Nu Mark's Strategic Product Innovation ("SPI") group and to include representatives from Consumer Insights, Product Development, Regulatory, Operations, Sensomics & Flavor Development, and Strategy & Business Development. This team would undertake an assessment of the Nu Mark product portfolio ("Portfolio Assessment Team"). (RX0450 (Altria) at 026).

565. For each product reviewed, the Portfolio Assessment Team collected a range of different data points, including consumer research, whether the product contains salts, market trends, and how nicotine is delivered to the body. The team organized these data points into "Strengths," "Opportunities," and "Red Flags" for each product. (RX0532 (Altria) at 005-13).

566. The Portfolio Assessment Team found that one of the strengths of MarkTen Bold was that its pH testing results showed levels that were "as close as [Altria had] to a cigarette," but also stated that MarkTen Bold did "not have [the] optimal ratio of nicotine and salts." (RX0532 (Altria) at 006). For the MarkTen cig-a-like, the team's slide presentation highlighted both that the product had shown some conversion potential in an adult user study and that its "[n]icotine delivery may be less satisfying than other devices." (RX0532 (Altria) at 005). The Portfolio Assessment Team also found that, as to Elite, the home usage test showed an impact on cigarette usage "by week 4-5" but also that Elite did "not appeal to those seeking immediate nicotine satisfaction." (RX0532 (Altria) at 008).

567. The Portfolio Assessment Team rated each of Nu Mark's cig-a-like and pod-based products – including MarkTen cig-a-like, MarkTen Bold, Elite, Cync, and Apex – as having limited conversion potential. MarkTen cig-a-like, Elite, Cync, and Apex – which all lacked salts – were each rated as having "low" conversion potential. (RX0532 (Altria) at 005, 008, 010, 011; *see also* Gardner (Altria) Tr. 3092-94 (discussing slides for MarkTen and Elite)). MarkTen Bold, Nu Mark's only product with salts, was deemed to have "Low-Med" conversion potential, with the caveat that it was in a declining product format and did not have the "optimal ratio of nicotine and salts" to "provide expected nicotine satisfaction." (RX0532 (Altria) at 006).

e. July 15, 2018 Draft Presentation

568. On July 12, 2018, Garnick began working with his regulatory team to put together a presentation for an upcoming August 2018 Board meeting. Garnick asked the Regulatory

Affairs team "to start putting together a board presentation so [the leadership] could discuss the issues as [it] saw them with the board." (Garnick (Altria) Tr. 1732; *see also* RX0914 (Altria); PX1786 (Altria); RX0642 (Altria); RX0689 (Altria)).

569. Magness, who was responsible for Altria's PMTA submissions in the summer of 2018, understood that Garnick, for the upcoming August 2018 Board meeting, "was interested in walking the board through each of the products in the e-vapor portfolio and helping them understand the regulatory questions and risks that [the regulatory team] had identified." (PX7017 (Magness (Altria) Dep. at 27, 176)). Garnick expressed to Magness that he wanted to share that product-specific information because he "was concerned with some of the product risks as [the regulatory team] had been updating him and wanted to make sure the board was clear about the regulatory risks [the team] had advised the business on." (PX7017 (Magness (Altria) Dep. at 179)).

570. The Regulatory Affairs team, including Magness, completed a first draft of a presentation for the Board on July 15, 2018. (RX0689 (Altria) at 001) ("July 15 Draft Board Presentation"). The substantive information in the draft "[came] from the scientists . . . and other technical experts in regulatory sciences." (Garnick (Altria) Tr. 1732).

571. Magness had no involvement with or knowledge of any negotiations with JLI while she was in Regulatory Affairs. (PX7017 (Magness (Altria) Dep. at 166-70, 284-85)). Greg Wilson and Joe Murillo, other members of the Regulatory Affairs team who also worked on the first draft of the Board presentation, were not involved in the JLI negotiations. (Garnick (Altria) Tr. 1706, 1761).

572. As to the MarkTen cig-a-likes, the July 15 Draft Board Presentation conveyed key concerns that the product could not satisfy two of the four criteria necessary to obtain PMTA approval: risk reduction and adult smoker conversion. (RX0689 (Altria) at 008; *see* Murillo (Altria/JLI) Tr. 2955-58; Garnick (Altria) Tr. 1735-36).

573. As to MarkTen Elite, the July 15 Draft Board Presentation conveyed key concerns that the product could not satisfy three of the four criteria necessary to obtain PMTA approval: manufacturing, risk reduction, and adult smoker conversion. (RX0689 (Altria) at 011; Murillo (Altria/JLI) Tr. 2956-58; Garnick (Altria) Tr. 1738-39). Elite's prospects as to the fourth criterion, no unintended consequences, were identified as uncertain because of the FDA's concerns regarding underage use of pod devices. (RX0689 (Altria) at 011; Murillo (Altria/JLI) Tr. 2957). Elite overall had "three strikes and a question mark," which reflected Murillo's view that Elite "had very, very low prospects of success for a PMTA as it stood." (Murillo (Altria/JLI) Tr. 2958; *see also* Murillo (Altria/JLI) Tr. 2954-55 ("[I]f a product is, like, super good at risk reduction and could be controlled in the manufacturing sense and so forth, but doesn't convert smokers, then it's a failure . . . .")).

574. As to Apex, the July 15 Draft Board Presentation conveyed key concerns that it was uncertain whether the product could satisfy three of the four criteria necessary to obtain PMTA approval: risk reduction, adult smoker conversion, and no unintended

consequences. (RX0689 (Altria) at 017; *see also* PX4149 (Altria) at 040 (final August 2018 Board presentation)).

f. August 3, 2018 Meeting

575. Quigley convened a meeting with Altria's senior management for August 2, 2018, which was held on August 3, 2018 ("August 3 Meeting"), in order to update them on Nu Mark's current year performance. (Quigley (Altria) Tr. 2029; PX7003 (Quigley (Altria) IHT at 123; PX1644 (Altria)). Quigley was not involved in the JLI negotiations. (Willard (Altria) Tr. 1390-91).

576. At the August 3 Meeting, Quigley advised senior management that Nu Mark "[l]ack[ed] quality pod products" and that Nu Mark's "Portfolio Gaps" included the lack of "[p]roducts that provide immediate nicotine satisfaction." (PX1644 (Altria) at 006, 018; Willard (Altria) Tr. 1395 (discussing PX1644 at 018 and explaining that "Portfolio Gaps" were "things [Nu Mark's] portfolio d[id]n't have that you would like to have")).

577. At the August 3 Meeting, Quigley highlighted that Elite was "Flavor Forward" because he believed that he "needed to start distinguishing with management that the products [Nu Mark] had [at the time] were flavor forward products but not necessarily the ones that had the nicotine satisfaction." (Quigley (Altria) Tr. 2037 (discussing PX1644 (Altria) at 018)).

578. In his presentation at the August 3, 2018 Meeting, Quigley concluded that "Nu Mark is limited to competing today in the cig-a-like segment." (PX1644 (Altria) at 006). Quigley viewed this as problematic, because by this point the cig-a-like segment was "very small and getting smaller relative to the growth in pods. So it was . . . not meaningful in terms of what was driving change in the tobacco landscape." (Quigley (Altria) Tr. 2032).

579. Willard recalled that at the August 3, 2018 Meeting, Quigley had explained, "at [that] point . . . the only products [Nu Mark] had that were at all competitive within a segment was the MarkTen cigalike, and while that might seem like a bright spot, [Altria] saw that the cigalike category was plummeting in share, and so if that was a bright spot, it was a very dim bright spot." (Willard (Altria) Tr. 1393).

580. In his presentation at the August 3, 2018 Meeting, Quigley concluded that Elite was not "proven to deliver broadly against [adult tobacco consumer] desires for a satisfying, enjoyable nicotine experience." (PX1644 (Altria) at 006). Quigley informed senior management that Elite did not have nicotine salts and "did not have the nicotine relationship and levels of nicotine that adult smokers would be looking for" and had "design flaws." (Quigley (Altria) Tr. 2031-33). Quigley conveyed that nicotine satisfaction "was the most important thing [Nu Mark] needed in [its] products and [Nu Mark] didn't have it." (Quigley (Altria) Tr. 1959, 2031-32).

581. Willard recalled that at the August 3 Meeting, Quigley "concluded that [Nu Mark's] attempt at making MarkTen Elite into a quality and successful pod product had failed or

was on its way to failure." (Willard (Altria) Tr. 1393-94). Willard understood Quigley to have been "suggesting that . . . we needed to go back and redouble our efforts to come up with a product that might be more competitive." (Willard (Altria) Tr. 1393-94).

582. Quigley's presentation at the August 3 Meeting highlighted the talent gaps at Nu Mark, particularly the need to bring in "external talent that had more experience innovating and that had experience with electronic products[.]" (Willard (Altria) Tr. 1396; *see also* PX1644 (Altria) at 022 ("Need proven capabilities to develop & launch[] innovative products outside a cigarette model[.]"); PX7041 Quigley (Altria) Dep. at 148-49 ("[Altria] had a long history of failure trying to do anything other than what [it] had proven to do successfully for decades," using a "cigarette model[.]")).

583. In advance of the August 3 Meeting, Elizabeth Mountjoy, then-Vice President of Corporate Strategy, circulated her "preliminary evaluation" of "the viability of Altria's current vapor products," which was "that Nu Mark does not have any products that merit a full-blown PMTA." (RX0199 (Altria) at 001; *see also* PX7034 (Mountjoy (Altria) Dep. at 145-48)). Mountjoy advised that "[t]he current portfolio should continue to be in market but with limited resources and applications. There needs to be (i) rapid advancement of our innovation system to develop a robust pipeline and (ii) an intense scrutiny of the people and roles supporting these efforts." (RX0199 (Altria) at 001).

584. To redirect Nu Mark going forward, at the August 3 Meeting, Quigley proposed a "bridge plan," to take Nu Mark from its then present situation, where there were gaps across Nu Mark's entire portfolio that needed to change, to a position that would allow Nu Mark to achieve leadership with FDA-approved products by 2025. The time period between 2018 and 2025 would be the bridge. (Quigley (Altria) Tr. 1956, 2040-41; PX1644 (Altria) at 004).

585. Quigley's bridge plan (F. 584) was "a very long plan" that required "five to seven years' worth of work[.]" (Quigley (Altria) Tr. 2032-33). "[I]t was going to be a long plan and an expensive plan, and there was a lot of risk on the science. We had learned, even when we thought we had a formula, we would be doing tox testing and it would fail. So it was . . . understood that this was going to be a long endeavor." (Quigley (Altria) Tr. 2042). Quigley acknowledged that even this plan was a "long shot," (PX7003 (Quigley (Altria) IHT at 118-19), and a "risky approach[.]" (Quigley (Altria) Tr. 2066).

586. Quigley believed that if Nu Mark was to achieve leadership, it "needed to have new products that [Nu Mark] did not have authorized to sell in the market, because [the existing products] didn't have the nicotine salt." (Quigley (Altria) Tr. 2040-41; *see also* Willard (Altria) Tr. 1392-93 (Willard recalled Quigley conveying, "in the short run, I can't do much better than we're doing today, but if you need us to be doing something in the here and now in the market, that's kind of the best I can do. And then he was saying, but I am willing to sign up to build a better capability going forward, but it's going to take a while.")).

587. Based on Quigley's presentation at the August 3 Meeting about the gaps in Nu Mark's portfolio and the path to future profitability getting pushed out, Gifford believed Altria "really needed to assess whether [it] needed to free up those people and financial resources and invest them elsewhere." (Gifford (Altria) Tr. 2781-82). Responding to the presentation, Gifford asked whether Altria should consider pulling Elite from the market. Quigley recalled that Gifford observed at the time that Altria was "losing money" and did not "have the nicotine we need," and Gifford questioned "why are we continuing to lose money on this piece of shit business." (PX7041 Quigley (Altria) Dep. at 33-34).

588. Gifford's questions at the August 3 Meeting made sense to Quigley in light of "the[] fundamental business gaps" that Quigley had highlighted at that meeting. (Quigley (Altria) Tr. 1958-59). Quigley agreed that it made sense for Gifford to raise the idea of potentially pulling distribution of Elite. (Quigley (Altria) Tr. 2047-49).

589. As of the August 3 Meeting, Quigley had a directive from Willard, who was responsible for such decisions, to continue to "go forward with the Elite business." (Quigley (Altria) Tr. 2049-50; PX1174 (Altria) at 001).

g. August 23, 2018 Board Meeting

590. On August 23, 2018, General Counsel Murray Garnick presented to Altria's Board ("August 23 Board Meeting") the assessment of Nu Mark's regulatory prospects that the Regulatory Affairs team had begun preparing in early July ("August 23 Board Presentation"). (Willard (Altria) Tr. 1417; RX0689 (Altria) at 001).

591. The purpose of the presentation at the August 23 Board Meeting was to give the Board of Directors "a full and complete briefing on the regulatory issues the company was facing with [its] e-vapor products." (Garnick (Altria) Tr. 1743).

592. Some of the slides from the August 23 Board Presentation were revised since the initial draft, the July 15 Draft Board Presentation. However, "the significant, substantive information" conveyed about "MarkTen Key Concerns" and "MarkTen Elite Key Concerns" from the July 15 Draft Board Presentation remained the same in the final presentation given to the Board on August 23, as did the assessments of the products' ability to meet PMTA approval criteria, referenced in F. 572 and 573. (Garnick (Altria) Tr. 1734-35; *compare* RX0689 (Altria) at 008, 011 *with* PX4149 (Altria) at 033, 036 *see also* Willard (Altria) Tr. 1420-26 (discussing product performance on four criteria needed to obtain PMTA approval); Jupe (Altria) Tr. 2303-07; Gardner (Altria) Tr. 2603-07).

593. As to the MarkTen cig-a-like, the August 23 Board Presentation conveyed that the product could not satisfy two of the four criteria necessary to obtain PMTA approval: meaningful risk reduction and adult smoker conversion. (PX4149 (Altria) at 033).

594. As to MarkTen Elite, the August 23 Board Presentation conveyed that the product could not satisfy three of the four criteria necessary to obtain PMTA approval: manufacturing,

risk reduction, and adult smoker conversion. Elite's prospects as to the fourth criterion, no unintended consequences, were identified as uncertain. (PX4149 (Altria) at 036).

595. In advance of the August 23 Board Meeting, Garnick and Willard discussed "that some of the board [might] be unhappy that [Nu Mark] hadn't had a better outcome," but they believed "that the board needed to know the facts about what [Garnick] had found in his regulatory review." (Willard (Altria) Tr. 1422; *see also* Gifford (Altria) Tr. 2787-88 (explaining that Altria's leadership informed the Board about the products' regulatory issues "[b]ecause we really needed to, one, be honest with the board, but two, you had to level-set about – we had to change directions in where we were headed, that what we were doing was not working, and even if it were working, there were significant regulatory hurdles to get through")).

596. At the August 23 Board Meeting, Garnick explained to the Board the FDA's expectations for reduced-risk products, the "[o]nerous and costly PMTA requirements," and that each of Nu Mark's products had significant regulatory red flags that likely would prevent FDA authorization. (PX4149 (Altria) at 027-041). Garnick conveyed that the primary problem, shared by all of Nu Mark's products, was lack of smoker conversion. (PX4149 (Altria) at 030, 033, 036; *see also* Willard (Altria) Tr. 1420-26; Jupe (Altria) Tr. 2303-07; Gardner (Altria) Tr. 2603-07).

597. Every Altria employee who was asked about the August 23 Board Presentation at trial or in a deposition affirmed that it was accurate. (Willard (Altria) Tr. 1427; Garnick (Altria) Tr. 1743; Jupe (Altria) Tr. 2305-07; Gardner (Altria) Tr. 2604-07; Murillo (Altria/JLI) Tr. 2961; PX7017 (Magness (Altria) Dep. at 285-86, 290-94); PX7041 (Quigley (Altria) Dep. at 155-56) ("the facts in the deck were accurate")).

3. Internal Assessment of Nu Mark, Fall 2018

a. September 2018 Assessment

598. Each September, Altria customarily begins putting together its plans for the upcoming year, and did so in September 2018. (Willard (Altria) Tr. 1433).

599. By September 2018, Altria "had concluded that many of the existing Nu Mark products – actually, all of the existing Nu Mark products – had failed to be successful in the marketplace," and that a "different approach" was needed. (Willard (Altria) Tr. 1434; *see also* Quigley (Altria) Tr. 2070-71 (agreeing Altria had "very little confidence" to "no confidence" in Nu Mark's current portfolio and its existing business approach to innovative products); PX7036 (Garnick (Altria) Dep. at 173-74) ("As it became clear to the company that our products were not converting smokers and were not going to get a PMTA and were not profitable, we clearly needed to think about the future and what we would be doing in the future in the e-vaping market.")).

600. In September 2018, Altria decided "to put in place growth teams," which were officially announced on October 5, 2018 ("Growth Teams"). (Gifford (Altria) Tr. 2799; RX1149

(Altria) at 001) (September 5, 2018 email exchange between Crosthwaite and Garnick indicating Altria's need to "course correct" all of Nu Mark's activity, including by restructuring Nu Mark to be moved under the Chief Growth Officer); RX0842 (Altria) at 001-02)). *See also* Willard (Altria) Tr. 1380-81, 1433-34 (discussing PX1182 (Altria) at 001); PX7031 (Willard (Altria) Dep. at 266-69) ("[U]ltimately, we decided that, really, none of the MarkTen products had a reasonable likelihood of future success as measured by adult smoker conversion or profitability or, frankly, even being able to stay on the market, and we decided to take a different approach, which was . . . take everything we had learned, start over again with what we called growth teams, and acknowledge that it was probably going to be, I don't know, five or six years before the products that were designed by those teams . . . could go on the market . . . . And so we decided that the growth teams [were] a long shot, it was going to be slow, but that was the best path forward.").

601. The Growth Teams were designed to be "small teams" of individuals that would be "empowered . . . to move quickly" in pursuit of developing new "satisfying, innovative products." (RX0842 (Altria) at 002; *see also* Quigley (Altria) Tr. 2070 (recalling that the Growth Teams "would be empowered to make all the decisions going forward about what work continued and what work [Altria] needed to go do")).

602. The goal of the Growth Teams was to develop new products that "had the potential to leapfrog the JUUL product, which was at the time the superior product in the marketplace." (Willard (Altria) Tr. 1275). "[L]eapfrog products are traditionally viewed as products that are not a little bit better than the products that are out in the marketplace but that are so much better that they become a break-through leader when they're put in the market." (Willard (Altria) Tr. 1378).

603. Altria believed that any new product that the Growth Teams might come up with would be many years away: "[Altria] would be out on the market, call it, . . . five to seven years to get through the FDA process." (Gifford (Altria) Tr. 2799; Garnick (Altria) Tr. 1661-62 (explaining it "would have taken five to ten years" before any product developed by the Growth Teams could have received FDA approval and been placed on the market); Willard (Altria) Tr. 1436 ("It [would] . . . likely . . . take a number of years before their product could be introduced into the marketplace to compete . . . .").

604. Altria's transition to Growth Teams was "a big undertaking" that required Altria to "identify the best talent to go on the teams" and replace those people in their prior roles, as well as design the teams. (Gifford (Altria) Tr. 2799-2800).

605. Altria had difficulty recruiting outside talent with experience in innovation, electronics, and product chemistry. (Willard (Altria) Tr. 1396-97; *see also* Quigley (Altria) Tr. 2294-96; Jupe (Altria) Tr. 2316-19; PX7024 (Crosthwaite (Altria/JLI) Dep. at 268-70, 279); PX7031 (Willard (Altria) Dep. at 261-64); PX7000 (Garnick (Altria) IHT at 86-87); PX7016 (Jupe (Altria) Dep. at 182-83); PX7017 (Magness (Altria) Dep. at 201-02)).

606. In order to fund and focus on the Growth Teams, Altria "would have to stop a lot of work, and that's what [it was] planning to do." (Jupe (Altria) Tr. 2311; Quigley (Altria) Tr. 2069-71, 2078 (explaining that as a result of the Growth Teams, Altria was going to "downsize the Nu Mark business"); RX1292 (Altria) at 055 ("Resources are constrained, spread across all Nu Mark initiatives and impacted by other operating companies[.]")).

607. On September 10, 2018, Altria's regulatory team took an inventory of ongoing projects for the purpose of transitioning to Growth Teams. (Jupe (Altria) Tr. 2310; *see also* RX0828 (Altria)). Quigley undertook a similar effort, to determine what Nu Mark work needed to continue and what work would stop for the Growth Teams "to then pick up going forward on vapor product development." (PX7003 (Quigley (Altria) IHT at 168-69)).

608. In a September 14, 2018 email, Garnick asked Quigley whether Altria should stop work on the PMTA for Elite: "My inclination is to stop work, because I have no reason to believe that Elite will be [the] device for the Juul fighter[.] I would have them shut down work in such a way to minimize the disruption if we have to start it back up again." (RX0319 (Altria) at 001).

609. In response to Garnick's email (F. 608), Quigley advised Garnick that "[w]e should stop ALL work around the [Elite] pmta." (RX0319 (Altria) at 001; *see also* Quigley (Altria) Tr. 2070-71 (agreeing that all work for the Elite PMTA should stop)).

610. On September 17, 2018, Willard approved a plan to establish the Growth Teams and discontinue all work on Elite. (PX1182 (Altria) at 001). Garnick explained that Altria would not have "pulled the trigger," on transitioning to Growth Teams "if [Altria] thought that the JUUL deal was going to go ahead." (PX7036 (Garnick (Altria) Dep. at 244-45)).

611. Within hours of receiving the FDA's September 12 Letter (F. 275, 280-282), Altria's leadership began to discuss the possibility of pulling MarkTen Elite from the market. In a September 12, 2018 email relating to Altria's planned response to the FDA, Garnick asked, "[s]hould we stop selling mark ten elite as part of our plan?" (PX1554 (Altria) at 001). As Garnick explained, Elite and the non-traditional flavored MarkTen cig-a-like products already were not "converting smokers, they were losing money, and they wouldn't get a PMTA[.]" The FDA's September 12 Letter provided Altria with another reason to discontinue these products. (Garnick (Altria) Tr. 1756-58).

612. By the time Altria received the September 12 Letter from the FDA, Elite had been on the market for "enough time [for Altria] to evaluate" it. (Willard (Altria) Tr. 1442-43; PX7003 (Quigley (Altria) IHT at 56) (explaining you need "26 weeks plus" (*i.e.*, 6 months) with a new brand to "really understand what you have")).

b. September 2018 Ranch Meeting

613. From September 25 to 27, 2018, Altria's leadership team gathered for an annual planning

meeting at Altria's off-site facility in Montana, known as the Ranch. ("September Ranch Meeting"). (Willard (Altria) Tr. 1443-44; *see also* PX7031 (Willard (Altria) Dep. at 268)).

614. By the time of the September Ranch Meeting, there was agreement among Altria's and Nu Mark's leaders that pulling pod products and non-traditional flavors from the market were two ways that the company should and would respond to the FDA's concerns. (Murillo (Altria/JLI) Tr. 2965-66; Quigley (Altria) Tr. 1993, 2079; PX7000 (Garnick (Altria) IHT at 102-03); PX7031 (Willard (Altria) Dep. at 268) ("[T]he management team went off together . . . as part of our normal process, and we said, all right, given everything we've learned about the MarkTen product portfolio, what do we think we should do. And, ultimately, we decided to significantly scale back the MarkTen product portfolio.").

615. During the September Ranch Meeting, Altria concluded that Apex, another pod product, was even less promising than Elite, and evaluated removing Apex from the market. (Willard (Altria) Tr. 1445; RX1176 (Altria) at 024).

616. Apex's "large," "baton" like shape was seen as too "[c]lunky." (King (PMI) Tr. 2535; RX0532 (Altria) at 011; *see also* PX7023 (Fernandez (Altria) Dep. at 197) (describing Apex as "too big, bulky")). Consumers did "not like the fatter cigar-like shape" or its "[b]ulky feel in the hand." (RX1290 (Altria) at 032).

617. PMI had marketed Apex in the United Kingdom as a test of mesh technology utilized in Apex and made Apex available to Altria to do a similar test run in the United States. PMI knew that it would have to make improvements in the form and other aspects of the product before there could be any wide scale commercialization. With information learned from the test run, PMI would seek to create an improved, next generation product. (King (PMI) Tr. 2534-35, 2545-47).

618. Nu Mark "never really built out a [PMTA] plan for Apex." (PX7017 (Magness (Altria) Dep. at 114)). As Paige Magness, who was responsible for e-vapor PMTAs at the time, explained, "Nu Mark deprioritized [Apex] because it was having trouble acquiring the devices for [Regulatory Affairs] to be able to get the answers [it] needed." (PX7017 (Magness (Altria) Dep. at 62-63); *see also* PX7017 (Magness (Altria) Dep. at 288-89); PX4149 (Altria) at 043 (final August 2018 Board presentation) (stating "No current plan to file PMTA")).

619. At the September Ranch Meeting, in discussing what Altria's response to the FDA's September 12 Letter should be, Altria had pretty much decided to pull Elite, and made the decision that day to talk to the Board about pulling Elite. (Garnick (Altria) Tr. 1808).

620. As summarized in a slide presented by Quigley on September 26, 2018 at the September Ranch Meeting, Altria's leadership decided "in response to [the] FDA," that Altria would "[r]emove Elite & Apex from the Marketplace[.]" (RX1176 (Altria) at 024; *see also* Quigley (Altria) Tr. 2078; Garnick (Altria) Tr. 1759; PX7036 (Garnick (Altria) Dep. at 241-43)).

621. As summarized in a slide presented by Quigley on September 26, 2018 at the September Ranch Meeting, the leadership also decided "in response to [the] FDA," that Altria would remove non-traditional flavored cig-a-like products (defined as all flavors other than tobacco, menthol, or mint) from retail. (RX1176 (Altria) at 024 ("Focus Retail on Brown and Green Cig-a-like Products"; and "Maintain Cig-a-like non tobacco and menthol flavors in E-Commerce"); Murillo (Altria/JLI) Tr. 2965-67 (explaining that Altria decided to pull its flavors to address the youth issue, with the exception of tobacco (shorthand "brown") and menthol/mint (shorthand "green")); Willard (Altria) Tr. 1444-45; Garnick (Altria) Tr. 1759; RX1176 (Altria) at 024; PX7000 (Garnick (Altria) IHT at 102, 105-06)).

622. Murillo thought that removing pods and non-traditional flavors was the right decision and made this recommendation at the September Ranch Meeting. (Murillo (Altria/JLI) Tr. 2967). He explained that he "thought it was really important to take Dr. Gottlieb's concern very, very seriously, and . . . that it was extremely appropriate to demonstrate to the FDA that the bigger principle of harm reduction was more important than sales . . . and that we could always come back with a PMTA in the future." (Murillo (Altria/JLI) Tr. 2967).

623. Willard agreed with the decision at the September Ranch Meeting to pull Altria's pod products because the products lacked the conversion capabilities necessary to justify keeping them on the market. (PX7031 Willard (Altria) Dep. at 266-70). As he explained, "if you can't convince" consumers to set down their other tobacco product "and start using yours, then there's no reason to keep the product on the market, particularly when it was a product that, in the case of MarkTen Elite, had some real challenges with regard to the manufacturing design that [Altria was] worried about getting approval from the FDA." (Willard (Altria) Tr. 1299-1300; *see also* PX7004 (Willard (Altria) IHT at 211-13) (distinguishing the two "very different product[s]" and explaining that, unlike JUUL, which was "probably the most successful product at converting adult cigarette smokers" and had "created a very significant positive public health benefit," Elite "was not actually very good at converting adult cigarette smokers," and "had a number of technical issues," so "when it was identified as a product of concern to the FDA, we thought that that was one more reason to withdraw that product from the marketplace")).

624. At the September Ranch Meeting, leadership continued to talk about how to move forward with the Growth Teams. Quigley explained that Nu Mark lacked the "internal development capabilities and processes required to lead in innovative products," including the "nicotine science and insights . . . to develop a product that [could] win and effectively switch smokers." (RX1176 (Altria) at 012). Quigley explained that the company needed to "[i]mplement a different structure and operating model," *i.e.*, the Growth Teams. (RX1176 (Altria) at 017).

625. At the September Ranch Meeting, Quigley proposed downsizing Nu Mark. (RX1176 (Altria) at 021-22). As Gifford explained, "if [Altria was] going to keep investing," it needed to figure out "how to shrink [costs] to reduce some of the overhead drag on [its] e-vapor or Nu Mark business." (Gifford (Altria) Tr. 2806-07). Because the options for

shrinking overhead were "either grow volume or reduce expenses," the conversation among leadership shifted to, "if [Altria is] going to think about growth teams and that being an additional investment, how can [it] start right-sizing this organization to free up some financial resources and people resources." (Gifford (Altria) Tr. 2806-07).

c. October 1, 2018 Communications Plan

626. After the September Ranch Meeting concluded, Altria began preparing for its meeting with the FDA, which was scheduled to take place on October 18, 2018 ("October 18, 2018 FDA Meeting"). (RX0314 (Altria) at 002).

627. As part of the preparation for the October 18, 2018 meeting with the FDA, Willard received an outline on October 1, 2018 detailing in part what he might say to the FDA, including with regard to decisions to withdraw pod-based products and limit cig-a-like flavors to tobacco, menthol, and mint ("October 1, 2018 Outline"). (Willard (Altria) Tr. 1446-49 (discussing RX0314 (Altria))).

628. The October 1, 2018 Outline was extensive (Willard (Altria) Tr. 1447) and was consistent with the September Ranch Meeting decisions to discontinue Elite and non-traditional flavored cig-a-likes. (Garnick (Altria) Tr. 1762; *see also* RX0314 (Altria) at 003-04).

629. The October 1, 2018 Outline indicated Altria's intent to recommend to the FDA that it "exercise its discretionary enforcement power to remove all pod-based products from the market until the manufacturer receives a market order." (RX0314 (Altria) at 003).

d. October 5, 2018 Board Call and Announcement of Growth Teams

630. In preparation for an October 5, 2018 call with the Board, in which Altria leadership advised the Board of the decisions made at the September Ranch Meeting (F. 620-621), on October 4, 2018, Garnick prepared notes with "some thoughts" for Willard to consider before presenting to the Board. (PX7036 (Garnick (Altria) Dep. at 242-43); PX1010 (Altria) at 001). Garnick's notes included:

- "At the last board meeting, we had a frank discussion about our product performance in the e-vapor space. We discussed that we currently do not have an evapor product that was a Juul fighter or free of regulatory problems." (PX1010 (Altria) at 002).

- "We are going to recommend that FDA require all pod products be taken off the market until PMTA's are obtained. We are going to say that we are seriously considering unliterally [sic] taking off Mark Ten Elite from the market." PX1010 (Altria) at 003).

- "Reason for unilateral action – (1) Gives us good cover and story for taking Mark Ten Elite off market now, (2) Not a JUUL fighter and not worth PMTA so we will have to take it off the market eventually; this is better context, (3) we have regulatory risk given design changes had to be made that are in grey zone, but defensible . . . (PX1010 (Altria) at 003).

- "We are going to recommend that FDA require all flavor e-vapor products be taken off the market until PMTAs are obtained . . . . We are going to say that we are unilaterally removing from the market all flavor e-vapor products other than tobacco, menthol, and mint." (PX1010 (Altria) at 003).

- "Regardless of Tree [the possible transaction with JLI], we believe we should take bold step[s]." (PX1010 (Altria) at 003).

631. Garnick explained that the phrase in his October 5, 2018 notes, "[g]ives us good cover and story for taking MarkTen Elite off market now," meant "what [he] said in the next sentence, that it was not a JUUL fighter and not worth the PMTA. So we will have to take it off the market eventually, and that this is a better context." (PX7036 (Garnick (Altria) Dep. at 176-77)). Garnick also explained, "I would also note that this also says 'regardless of Tree.' We believe that we should do this regardless of whether there was a Tree deal or not. And, at this time, it didn't look like there would be." (PX7036 (Garnick (Altria) Dep. at 177)).

632. On October 5, 2018, Altria officially announced the launch of the Growth Teams. (RX0842 (Altria) at 001-02).

633. On October 5, 2018, Willard circulated a company-wide memo announcing the formation of the Growth Teams, explaining that Altria had "spent the past 100 days doing a deep situation analysis" and determined that a "change in direction [was] necessary[.]" The company had decided that Growth Teams were the best way to continue the transformation that Altria had begun in May 2018 when it "create[ed] the Chief Growth Officer and restructur[ed] parts of the organization to accelerate [Altria's] innovation pipeline." (RX0842 (Altria) at 001; *see also* Willard (Altria) Tr. 1434-35; Gifford (Altria) Tr. 2812-13).

634. The Growth Teams would be the culmination of the 100-day review that had started in May 2018 and led primarily by Quigley. (Quigley (Altria) Tr. 2079-80; *see also* PX7003 (Quigley (Altria) IHT at 89-90)). Originally, Quigley proposed that Nu Mark run the Growth Teams, but Altria decided instead to staff the teams with "different people who [had] a fresh perspective." (Quigley (Altria) Tr. 2068-69). "[T]he idea [was] to start from scratch and build the expertise." (PX7000 (Garnick (Altria) IHT at 86-87)).

635. After the October 5, 2018 announcement of the Growth Teams, Nu Mark's "focus" would be "narrow[ed] . . . to the current products in the marketplace." The Growth Teams – which were to be housed outside Nu Mark – would take over innovative product development work. (RX0842 (Altria) at 003).

636. Roughly 60 Nu Mark employees would be terminated or transferred as part of the Growth Teams strategy. (RX0842 (Altria) at 003).

637. After the October 5, 2018 announcement of the Growth Teams, the Growth Teams began to work and had "free rein" to determine the direction of e-vapor product development. (Garnick (Altria) Tr. 1657; *see also* Jupe (Altria) Tr. 2309 (noting that Growth Teams had the ability to set their own direction, choose what to work on, and were not constrained "by how [Altria] ran things in the past and hierarchical decision-making")).

638. The Growth Teams were unconstrained by budget. Then-CFO William ("Billy") Gifford "met with each of the growth teams and told them do not let the budget be a constraint on [their] efforts," "giving them the freedom to start with the consumer and build from that point forward." (PX7010 (Gifford (Altria) IHT at 192-93); *see also* PX7016 (Jupe (Altria) Dep. at 216-17) (noting that in the course of Altria's normal budgeting process, the Growth Teams were in the process of "defining . . . their budget")).

639. At the time of the announcement of the Growth Teams in October 2018, Altria "didn't even have a product concept in mind, let alone a leapfrog concept . . . . The idea was to bring some of our best scientists together . . . and come up with a product concept." That product would then require a PMTA before it could be sold. (Garnick (Altria) Tr. 1661-62; *see also* Jupe (Altria) Tr. 2309, 2313 (noting that autonomy was intended to facilitate product development by 2023, which was an "aggressive" schedule); PX7000 (Garnick (Altria) IHT at 132) ("There was no concept of a product they were working on. It was a bunch of people in a room saying, okay, think of something."); PX7036 (Garnick (Altria) Dep. at 245-46)).

640. Jupe, who was tasked with overseeing the Growth Teams, explained that the Growth Teams would first need to finish the product definition phase, and then proceed to the development phase, where the Growth Teams would engineer the product. After that, they would go to the commercial phase, where they would write all the manufacturing specifications, after which they would "lock" the design. This "product development cycle" would take two years, "if you're lucky." After design lock, the Growth Teams would begin gathering scientific evidence, which would take approximately two years. Then the product goes through FDA review, which could easily take 18 months. "So [Altria was] five to six years away from a potential product." (PX7016 (Jupe (Altria) Dep. at 340-41)).

641. To help lead the Growth Teams, in October 2018, Altria hired Bassiouni Khalid as Senior Vice President of Innovative Product Development. (Jupe (Altria) Tr. 2317; RX0842 (Altria) at 002) (internal announcement describing Khalid as an "innovation leader with a proven track record," and a successful Amazon executive who had "led platform development for [Amazon] Alexa[.]").

642. Altria had been trying to hire someone with innovation experience "for a number of years," and in 2018, then-Chief Growth Officer Crosthwaite led a "very active effort . . .

to hire somebody with that skill set at a relatively senior level[.]" (PX7031 (Willard (Altria) Dep. at 264); *see also* PX7024 (Crosthwaite (Altria/JLI) Dep. at 269) (describing the search for talent as "very, very challenging"); PX7015 (Gogova (Altria) Dep. at 317-19) (noting Altria was in need of a leader who "could help [the Growth Teams] and teach [them] to change the culture and mindset" of the team members, as well as leverage an "external network with other innovators, potentially manufacturing facilities [and] academia")).

643. Within days of Khalid joining Altria in October 2018, the company realized that Khalid had plagiarized his resume, invented references, and entirely fabricated his claimed employment history. (Jupe (Altria) Tr. 2319-20; RX0248 (Altria) at 002-03).

644. Based on the events described in F. 643, Altria terminated Khalid's employment and placed Jupe in charge of the Growth Teams. (Jupe (Altria) Tr. 2320). Jupe's background is not in developing innovative products or electronic-based products; he is a physicist whose primary experience is in the design and manufacturing of conventional cigarettes. (Jupe (Altria) Tr. 2198-2202).

645. Altria began again to look for external talent to replace Khalid, but "there was no other candidate . . . that came as close to being hired[.]" Altria "found it difficult to find someone who had the expertise that [it was] looking for who was willing to move to Richmond." (PX7000 (Garnick (Altria) IHT at 82); *see also* PX7024 (Crosthwaite (Altria/JLI) Dep. at 269)).

4. October 25, 2018 Withdrawal of Products

646. On October 18, 2018, Altria met with Commissioner Gottlieb to discuss the FDA's September 12 Letter and Altria's planned response. (Willard (Altria) Tr. 1288, 1446). At the meeting, Altria informed the FDA of its intention to withdraw its pod-based products and its non-traditional cig-a-like flavors from the market. (Willard (Altria) Tr. 1448).

647. Altria's management "didn't think it would be appropriate to announce [Altria's decision to withdraw pod-based products and flavored cig-a-likes] before telling the FDA" at the October 18 Meeting. (Quigley (Altria) Tr. 2081-82).

648. On October 25, 2018, Altria sent its formal response to the FDA's September 12 Letter, in a letter that the company made public that same day ("October 25 Letter to the FDA"). (Willard (Altria) Tr. 1450-51; PX1071 (Altria)).

649. In its October 25 Letter to the FDA, Altria announced that it would withdraw its pod products from the market. (PX1071 (Altria) at 002). Altria stated that although it did not believe it had a "current issue with youth access to or use of [its] pod-based products," it did "not want to risk contributing to the issue" with a product that was not converting adult smokers. (PX1071 (Altria) at 003).

650. In its October 25 Letter to the FDA, Altria also announced that it would discontinue all non-traditional cig-a-like flavors. (PX1071 (Altria) at 003).

651. After sending it to the FDA, Altria publicly released the October 25 Letter to the FDA "as part of a collection of information related to [its third quarter] earnings call." (Willard (Altria) Tr. 1237-39, 1452-53; RX2028 (Altria) at 001).

652. Altria timed the release of the October 25 Letter to the FDA to coincide with its regularly scheduled earnings call because "there was material information in [the October 25 Letter to the FDA] related to some of the actions [it was] suggesting to the FDA," which Altria "thought the investment community was entitled to learn about[.]" (Willard (Altria) Tr. 1238-39).

653. In the third quarter earnings call on the morning of October 25, 2018, Altria explained that although Elite and non-traditional flavored cig-a-likes were being withdrawn from the market, 80 percent of Nu Mark's e-vapor volume from the third quarter would remain on the market. (PX9082 (Altria) at 003). That was "essentially because, while [Nu Mark] had a number of flavored products and [it] had certainly some volume in the pod-based products, most of [its] volume was tobacco flavored or a menthol or mint, and so while this was an impact to [its] business, there was still a number of products that represented a lot of volume that would remain on the market." (Willard (Altria) Tr. 1455-56; *see also* Gifford (Altria) Tr. 2809).

5. December 2018 Withdrawal of Cig-a-likes and Closing of Nu Mark

654. Altria decided to stop making the MarkTen cig-a-like products to save money in order to fund either the Growth Teams or, if Altria and JLI were able to finalize the terms of the Transaction, to fund Altria's investment in JLI. (F. 655-681).

a. Budgeting Review

655. In the course of its annual budget process in the fall of 2018, Altria realized that both of the "two pathways" Altria was pursuing to grow its e-vapor business – developing a leapfrog product through the Growth Teams or the potential investment in JLI – would require a substantial financial commitment. (Gifford (Altria) Tr. 2841-42; *see also* PX7010 Gifford (Altria) IHT at 18, 198, 203-04 (noting annual budget is prepared in December)).

656. If Altria "could . . . ever be successful with JLI, . . . [it] would have to finance [the investment], and any money [it] saved would help with the interest cost. Or if [Altria] were unsuccessful with JLI, [that money would] fund the growth teams, and those investments would have to step up through time as they made progress . . . ." (Gifford (Altria) Tr. 2842).

657. Altria anticipated that each Growth Team would cost approximately $30 million per year, and was prepared to allocate more money if necessary. (RX0570 (Altria) at 012, 024;

PX7010 Gifford (Altria) IHT at 192-93 (explaining Altria would have given the Growth Teams $100 million per year if that's what they needed – "budget [would not] be a constraint" on the Growth Teams' efforts)).

658. If Altria completed an investment deal with JLI, Altria "needed to find about $500 million in cost savings [per year] to pay for it." (PX7036 Garnick (Altria) Dep. at 214).

659. "[A]s the financial person," Gifford believed that Altria "needed to . . . free up the resources to fund the growth teams, or make the decision to fund . . . [the] interest related to an investment [in JLI]." (PX7010 (Gifford (Altria) IHT at 188-89)).

b. Nu Mark Profitability

660. Nu Mark lost money every year during Begley's tenure as President and General Manager at Nu Mark from July of 2015 to May 31, 2018. (Begley (Altria) Tr. 1087-88).

661. From 2014 to 2017, Nu Mark lost $600 million. (PX4029 (Altria) at 010).

662. In 2015, Nu Mark lost $182 million. (PX4040 (Altria) at 012; Begley (Altria) Tr. 1061; Gifford (Altria) Tr. 2724-25).

663. In 2016, Nu Mark lost $118 million. (Gifford (Altria) Tr. 2726; RX0746 (Altria) at 007). In February 2015, Altria had projected that Nu Mark would lose $72 million in 2016. (RX1733 (Altria) at 092).

664. In 2017, Nu Mark lost $71 million. (Gifford (Altria) Tr. 2736-37; PX4012 (Altria) at 010).

665. In 2017, Nu Mark expanded distribution for MarkTen cig-a-likes by approximately 14,000 stores, from 51,000 stores in late 2017 (PX4073 (Altria) at 002), to 65,000 stores by the early 2018. (PX9045 (Altria) at 006). During this period, Nu Mark also expanded distribution for MarkTen Bold, which grew from 5,000 retail stores in late 2016 (RX0746 (Altria) at 018), to 25,000 stores by early 2018. (PX9045 (Altria) at 006).

666. There are various costs associated with expanding distribution into new locations, and greater volume is necessary to cover the fixed cost to drive profitability. (PX7040 (Gifford (Altria) Dep. at 74-75); Gifford (Altria) Tr. 2727).

667. Cost-cutting was an important driver of any reductions in Nu Mark's losses during 2016 and 2017. Cutting costs and thereby potentially increasing marginal contribution, while helpful, does not necessarily assure a path to long-term profitability. (Begley (Altria) Tr. 1040-41, 1046).

668. From 2014 to 2017, Nu Mark reduced its variable production costs for MarkTen cig-a-like products from $1.17 to $0.70 for cartridges and from $5.02 to $2.95 for devices.

(PX7002 (Schwartz (Altria) IHT at 078-79) (discussing PX1093 (Altria) at 008 (Nu Mark Operations Financial Results for September 2018 vs 2018 Operating Budget))).

669. Every year that Begley was the CEO of Nu Mark, the point in the future at which Nu Mark hoped that it would break even or make a profit was pushed out further. (Begley (Altria) Tr. 1088; F. 670-672, 674).

670. In 2015, Nu Mark predicted that it would become profitable in 2017. (Gifford (Altria) Tr. 2719-21; RX1733 (Altria) at 092).

671. In 2016, Altria "pushed" its profitability projection for Nu Mark "out a year to 2018." (Gifford (Altria) Tr. 2725-26; PX4040 (Altria) at 012).

672. In its 2017 three-year strategic plan, Nu Mark had predicted that it would likely lose $33 million in 2018. Nu Mark's 2017 plan "pushed out another year" the estimated break-even point to 2019. (Gifford (Altria) Tr. 2726; RX0746 (Altria) at 007).

673. The fact that projections for when Nu Mark would break even and turn a profit were repeatedly pushed out in time, was "troubl[ing]" to Gifford, as the CFO. (Gifford (Altria) Tr. 2738).

674. By February of 2018, Nu Mark was estimating that it would lose $70 million in 2018, followed by a $24 million loss in 2019, before potentially turning a profit in 2020. (PX4012 (Altria) at 010; Gifford (Altria) Tr. 2737). Without "substantial volume growth" in the cig-a-like form, Begley explained, Altria was "going to continue to lose $70 million a year on the cigalike platform." (PX7022 (Begley (Altria) Dep. at 225)).

675. In the first nine months of 2018, Nu Mark lost $101 million. (Gifford (Altria) Tr. 2817-19; Willard (Altria) Tr. 1458-59; PX1127 (Altria) at 003). In that same time period, Nu Mark's share of the total dollars spent in the e-vapor market decreased from approximately 15 percent to 4.7 percent. (RX1447 (JLI) at 009).

676. Nu Mark's annual three-year plan, presented in February 2018, predicted that cig-a-like volumes would decline and pod volumes would grow substantially. (PX4012 (Altria) at 009). With only cig-a-like products and without a successful pod-based product, Nu Mark "had no chance of achieving [its financial projections]" and would continue to incur losses. (Begley (Altria) Tr. 1087-88).

677. Altria's November 2018 year-to-date financial results showed that Nu Mark's sales volume from January to November 2018 improved by 20.7% as compared to the same period in 2017. (PX7040 (Gifford (Altria) Dep. at 59-62) (discussing PX4231 (Altria) at 003 (Altria Group, Inc. Operating Companies 2018 November YTD Financial Results))). However, unit sales were 3.8 million units below the projected sales set in Altria's budget. (PX4231 (Altria) at 003).

678. In 2018, Nu Mark's objective was to "attain a #1 or #2 position" in multi-outlet and convenience stores. Although MarkTen sales volume grew by 21 percent versus the prior year, MarkTen achieved the "#3 position with MarkTen retail share of 6.8 [percent]," which was "down (5.8 [percentage points]) vs. [the prior year] due to significant growth of competitive products driving 73% growth in the category." (PX4366 (Altria) at 055).

679. Altria was willing to accept losses to make a long-term investment in e-vapor, but, as Begley explained, "there had to be a reasonable path to profitability at some point in the future, and in 2016, [Altria] thought [it] had that path to profitability. It didn't turn out to be that way, . . . so certainly short-term investment is worth it as long as there's a reasonable path to long-term profitability." (Begley (Altria) Tr. 1019-20).

680. As of December 3, 2018, Nu Mark expected to lose $235 million over the next three years. (PX4232 (Altria) at 001, 013; *see also* RX0973 (Altria) at 014 (noting that the "[c]urrent 3YP [3 year plan] forecasts aggregate losses of over $200 million").

681. Altria spent at least $50 million per year for support services and overhead for Nu Mark. (PX4232 (Altria) at 013; *see also* PX7010 (Gifford (Altria) IHT at 202-03) (explaining this figure was likely "understated" due to Altria's accounting process for expenses allocated across operating companies)).

c. Additional Issues with Cig-a-likes

682. In late November 2018, Altria learned that the BVR 2.8 battery that Altria was developing for use in its cig-a-likes (F. 403) was "generating a relatively significant percentage less aerosol. So there was mass degradation[.]" (Murillo (Altria/JLI) Tr. 3070-71). After changes in the manufacturing supply, Altria found "the product was no longer performing the way" Altria thought. (PX7026 (Gardner (Altria) Dep. at 258-59) ("The aerosol delivery was different from what it was in 2016.")).

683. Late in the process of development of the BVR 2.8 battery, Altria's scientists discovered that there were problems with the cig-a-like's wicking rate,[41] which had decreased with the BVR 2.8 battery and with the cartridge, which needed to be heat treated (known as "annealing") for the dry puff prevention technology to work properly. (Gardner (Altria) Tr. 2571-74); RX0552 (Altria) at 006, 007 (noting unresolved investigation into problems with the cartridge and battery quality).

684. Altria scientists worked to resolve the changed aerosol mass problem referenced in F. 682 but were unable to do so. (PX7016 (Jupe (Altria) Dep. at 82-83) ("[W]e never figured out how to get a consistent aerosol at the end of the day."); PX7017 (Magness (Altria) Dep. at 155-56) (explaining consideration of an annealing process that may have had to be added to address the aerosol mass change); PX1407 (Altria) at 014; RX0552 (Altria) at 006, 007 (noting unresolved investigation into problems with the cartridge and battery quality)).

[41] Wicking rate is the "rate at which the liquid reache[s] the heater" which then results in the aerosol mass. (Gardner (Altria) Tr. 2573-74).

685. Altria's scientists were unsure that they had a dry puff prevention fix that they could submit for a PMTA for the cig-a-like with the BVR 2.8 battery. (Gardner (Altria) Tr. 2573-74; *see also* PX7015 (Gogova (Altria) Dep. at 244-46) ("[The scientists] knew what to anticipate and what to look for, but [they] had no way to know exactly what are the consequences [of the battery change].")).

686. Murillo was "concerned" that the aerosol mass issue referenced in F. 682 "could not be resolved favorably in time to do all the work required for an application, including stability [studies (F. 226)]." As an example, for stability studies, in order to show "12 months stability, you need 12 months." (PX7027 (Murillo (Altria/JLI) Dep. at 131-32); *see also* Murillo (Altria/JLI) Tr. 2937-38).

d. December 7, 2018 Product Withdrawal and Closing of Nu Mark

687. On December 7, 2018, Willard sent an internal email to Altria employees announcing that the company would be discontinuing "production and distribution of all MarkTen and Green Smoke e-vapor products" and the company issued a public press release stating the same. (Willard (Altria) Tr. 1459-60; RX1000 (Altria) at 004 (email); PX9080 (Altria) at 001 (Altria press release) ("December 7 Announcement")).

688. The December 7 Announcement conveyed that, in addition to MarkTen and Green Smoke products, Verve products would also be discontinued. Verve was not an e-vapor product. Verve was an oral product which was essentially a chewable rubber disk that released flavor and nicotine. (Willard (Altria) Tr. 1459; Garnick (Altria) Tr. 1777-78).

689. Altria was losing money on Verve and "there was no sign it was ever going to be successful." (Willard (Altria) Tr. 1459-60; PX9080 (Altria) at 001; Garnick (Altria) Tr. 1777-78).

690. The December 7 Announcement quoted Willard stating: "We [Altria] remain committed to being the leader in providing adult smokers innovative alternative products that reduce risk, including e-vapor," adding, "We do not see a path to leadership with these particular products and believe that now is the time to refocus our resources." (PX9080 at 001 (Altria press release)).

691. Altria's internal and public announcements regarding the withdrawal of e-vapor products from the market in December 2018 conveyed that the decision to withdraw the cig-a-like products was made based on "current and expected financial performance, coupled with regulatory restrictions that burden our ability to quickly improve these products." (Willard (Altria) Tr. 1459-61; RX1000 (Altria) at 004; PX9080 (Altria) at 001).

692. As Gardner explained regarding the withdrawal of e-vapor products from the market in December 2018, "Without a pathway to profitability, [Altria] had already funded the growth teams," and [Altria] decided, "let's shut it down, let's not lose additional money,

and let's look at how . . . [to] continue the growth teams and look for ways to participate well into the future in the e-vapor space." (Gifford (Altria) Tr. 2841; *see also* Willard (Altria) Tr. 1460 ("[Altria] was making hard decisions to cut costs on products that hadn't worked out, and so [it] ultimately decided to eliminate these e-vapor products."); PX7024 (Crosthwaite (Altria/JLI) Dep. at 283) (recalling Altria decided it "would be better served putting resources towards future platforms and not supporting the [cig-a-like] platform"); PX7031 (Willard (Altria) Dep. at 280-81); PX1182 (Altria); RX0878 (Altria)).

693. Regarding the decision to withdraw the e-vapor products from the market announced in December 2018, Altria employees not involved with the JLI negotiations agreed that the products should come off the market. Quigley thought it was a reasonable business decision to discontinue Nu Mark's business because "it was still losing money." (Quigley (Altria) Tr. 1993; *see also* PX7041 (Quigley (Altria) Dep. at 131) ("Ultimately, . . . [Nu Mark] didn't have the products, it was losing money and, . . . ultimately, I think it was the right business decision.")). Jupe "was very pleased by the decision in that we were refocusing our resources [and] thinking forward[.]" (Jupe (Altria) Tr. 2322-23). Schwartz explained, "[c]onsumers had moved away from cigalike. If the idea was to convert smokers, which was our mission, right, and to achieve leadership in the e-vapor space, we were not going to accomplish that with what was left of the portfolio." (PX7018 (Schwartz (Altria) Dep. at 162); *see also* PX7002 (Schwartz (Altria) IHT at 160) (agreeing with the decision because Nu Mark "only had a cig-a-like franchise" left)). Michael Brace, who at the time was the General Manager of Nu Mark, "underst[ood] the decision to discontinue Nu Mark and agree[d] with it." (PX7013 (Brace (Altria) Dep. at 11, 172)).

694. In a December 10, 2018 email, Altria's Garnick requested preparation of a draft "restructuring plan" to help the finance department identify potential budget cuts in the area of regulation, if the transaction with JLI occurred. Garnick noted that, assuming Altria completed a transaction with JLI, there would be no costs related to e-vapor research, product integrity work, or competitive analysis relating to e-cigarettes. (PX1265 (Altria) at 001). As Garnick explained, money in the budget would be used to fund the Growth Teams or "to pay the interest on the loan to pay for the JUUL transaction." (PX7000 (Garnick (Altria) IHT at 148)).

> [U]pper management did not want to announce . . . , if the transaction happened, without at the same time announcing productivity cuts to pay for the interest for JUUL in order to reassure investors that we had a way to pay for the interest for JUUL, which means that before JUUL was completed, we had to be prepared for, generally speaking, what productivity cuts we were prepared to make in case the transaction with JUUL closed[.]

(PX7000 (Garnick (Altria) IHT at 148)).

695. In a December 20, 2018 email, Altria's Jupe wrote that "[s]ubsequent to today's announcement [of the JLI transaction], it is important to convene a communications

approach for internal and external recipients to ensure a rapid and comprehensive closure to product development work associated with e-vapor." (PX1022 (Altria)). "Internal" recipients referred to Altria team members, and "external" recipients referred to third-party partners. (PX7016 (Jupe (Altria) Dep. at 283-84)).

696. Altria disbanded its e-cigarette Growth Teams upon closing the JLI Transaction. The Growth Teams were disbanded because Altria ceased development work on e-cigarettes due to the JLI Transaction. (Garnick (Altria) Tr. 1660; PX7026 (Gardner (Altria) Dep. at 176)). If the JLI Transaction had not occurred, Altria would have continued to fund the Growth Teams. (Garnick (Altria) Tr. 1660). Gifford recalled that Altria disbanded the Growth Teams "as [Altria] moved into December" 2018, although he was unable to recall the exact date. (Gifford (Altria) Tr. 2877).

697. Nu Mark as a business was shut down toward the end of 2018. Nu Mark as an entity no longer exists. (Begley (Altria) Tr. 1050).

698. Altria's Garnick confirmed in a January 2, 2019 email that, going forward, Altria had no role in e-cigarettes and that Altria R&D would not relate to e-cigarettes. (PX4531 (Altria) at 002).

L. Transaction Negotiations

1. Background

699. By mid-November 2017, Altria's budget projections for 2018 predicted that the pod/hybrid market segment would grow by 55 million units sold in the multi-outlet convenience channel, compared to the latest estimate for 2017, and that sales of cig-a-like products and open system products would collectively decline by 25 million units "due to Hybrid growth[.]" (RX0188 (Altria) at 001, 026).

700. Around November 2017, "JUUL . . . was growing quite rapidly in both volume and market share" and "was the fastest growing product in the e-vapor category." (Willard (Altria) Tr. 1341-42; *see also* Crozier (Sheetz) Tr. 1487 (explaining that JUUL "really took off" in the fall of 2017); Begley (Altria) Tr. 1055 ("[T]here appeared to be one format that was winning in the marketplace, which was a pod-based product with nicotine salts, which primarily was JUUL.")).

701. MarkTen was "the #2 brand" in e-vapor during 2017; however, JUUL "displaced MarkTen's position" in the fourth quarter of 2017. Nu Mark's section of the annual incentive compensation memo for Altria's Board of Directors predicted that "based on current momentum" JUUL was "likely to outpace Vuse's #1 position by the end of [first quarter] 2018." (PX4042 (Altria) at 006; Begley (Altria) Tr. 1021-22). At this time, Reynolds' Vuse brand consisted only of cig-a-likes. (F. 82, 84).

702. In November 2017, Altria told its investors that "innovation can be achieved in multiple ways – through organic product development" and "through strategic partnerships and acquisitions . . . ." (RX0176 (Altria) at 156 (Investor day presentation)).

703. In 2017, Altria viewed JLI as the most promising acquisition in the burgeoning market for pod-based devices. (RX0865 (Altria) at 013).

2. Negotiators

a. Altria

704. The primary negotiators for Altria for the Transaction were senior executives Howard Willard, Billy Gifford, Murray Garnick, and K.C. Crosthwaite. (Willard (Altria) Tr. 1169-70; PX7031 (Willard (Altria) Dep. at 123-24)).

705. Howard Willard was Chairman and Chief Executive Officer ("CEO") of Altria from approximately May 2018 until April 2020. (JX0001 (Joint Stipulations of Law and Fact at 003 ¶ 25)). Prior to becoming CEO in May 2018, Willard was Altria's Chief Operating Officer ("COO"). (PX7004 (Willard (Altria) IHT at 14-15)).

706. Billy Gifford is Altria's current CEO. He became CEO of Altria in April 2020. Prior to becoming CEO in April 2020, Gifford was Altria's Chief Financial Officer ("CFO") starting in March 2015, and its Vice Chairman starting in May 2018. (JX0001 (Joint Stipulations of Law and Fact at 003 ¶ 26)).

707. Murray Garnick is Executive Vice President and General Counsel of Altria, a position he has held since July 2017. Garnick also leads Altria's Regulatory Affairs (since July 2017) and Regulatory Sciences (since June 2018). (JX0001 (Joint Stipulations of Law and Fact at 003 ¶ 27)).

708. K.C. Crosthwaite was Chief Growth Officer at Altria from June 2018 until September of 2019. Prior to becoming Chief Growth Officer, Crosthwaite was President and CEO of Altria subsidiary Philip Morris USA. Crosthwaite is currently CEO of JLI. He became CEO of JLI in September 2019. (PX7024 (Crosthwaite (JLI/Altria) Dep. at 14-15); PX7006 (Crosthwaite (JLI/Altria) IHT at 8)).

709. JLI's lead negotiators (F. 715) most frequently interacted with Willard, Gifford, and Garnick, with Willard and Gifford being the primary points of contact. (Pritzker (JLI) Tr. 662-63; Gifford (Altria) Tr. 2761; PX7011 (Valani (JLI) IHT at 31)).

710. Altria Board member Dinyar Devitre was a trusted acquaintance of Riaz Valani, one of JLI's Board members and lead deal negotiators. (PX7004 (Willard (Altria) IHT at 191)). As a friend of Valani's, Devitre acted as a facilitator for negotiations. (PX7001 (Devitre (Altria) IHT at 13, 66-67) (explaining that he "was always very careful never to make an offer or to negotiate. . . . [W]hen it came to anything to do with a deal . . . it would be purely facilitation and nothing else."); PX7001 (Devitre (Altria) IHT at 80).

711. Devitre was significantly less involved in JLI negotiations than the other Altria negotiators; however, he was kept generally informed of the status of negotiations because Valani would sometimes contact Devitre to discuss JLI's thoughts on the deal or to express concerns about what Altria was proposing. Devitre kept the Altria negotiators informed regarding what he was told by Valani. (PX7031 (Willard (Altria) Dep. at 134, 143-44)).

712. When JLI would send a term sheet for the proposed Transaction to Willard, it was the normal practice for Willard to share the term sheet with Gifford, Garnick, and Crosthwaite. (PX7031 (Willard (Altria) Dep. at 176-77)).

713. Willard, Garnick, Gifford, and Crosthwaite would provide verbal comments and feedback on term sheets, and Altria's lawyers would consolidate those comments into marked-up term sheets. The lawyers would then circulate the mark-ups to make sure that they captured the feedback provided. (Willard (Altria) Tr. 1195-96).

714. Representatives of Perella Weinberg Partners ("PWP"), the investment bank that advised Altria with respect to the Transaction, participated in negotiations and sometimes communicated directly with JLI representatives. James Wappler, a partner at PWP, led the PWP team advising Altria. (Willard (Altria) Tr. 1181-82; PX7028 (Wappler (PWP) Dep. at 12, 15-16)).

b. JLI

715. The primary deal negotiators for JLI with respect to the Transaction were Nicholas Pritzker, Riaz Valani, and Kevin Burns. (Pritzker (JLI) Tr. 661-62, 676, 758-59; Willard (Altria) Tr. 1171; PX7031 (Willard (Altria) Dep. at 124-25)).

716. Pritzker is an investor in JLI through his family investment entities. (Pritzker (JLI) Tr. 660). Pritzker is also a member of JLI's Board of Directors. He has been on the Board of JLI (and its predecessors) since approximately 2013. (JX0001 (Joint Stipulations of Law and Fact at 004 ¶ 34); Pritzker (JLI) Tr. 764-65).

717. Valani was one of the initial investors in the company that is now JLI, through Valani's venture capital business, Global Asset Capital. Valani is also a member of JLI's Board of Directors. He has been on the Board of JLI (and its predecessors) since approximately 2007. (JX0001 (Joint Stipulations of Law and Fact at 004 ¶ 35); Valani (JLI) Tr. 899-900).

718. Kevin Burns was the CEO of JLI from approximately December 2017 to September 2019. (JX0001 (Joint Stipulations of Law and Fact at 004 ¶ 32)).

719. Investment banking firm Goldman Sachs advised JLI on the transaction. Peter Gross, the Vice Chairman of Investment Banking at Goldman Sachs, worked on the Altria

transaction on behalf of JLI. (Pritzker (JLI) Tr. 678; PX7043 (Gross (Goldman Sachs) Dep. at 14, 16)).

3. Initial Exploratory Discussions (2017-April 2018)

720. In negotiations, the names "Tree" or "Project Tree" referred to the potential Altria/JLI transaction, or to JLI itself. (Pritzker (JLI) Tr. 725; Willard (Altria) Tr. 1183). The name "Richard" was used to refer to Altria. (Pritzker (JLI) Tr. 688-89; Willard (Altria) Tr. 1210; Garnick (Altria) Tr. 1586). The name "Jack" was used to refer JLI. (Pritzker (JLI) Tr. 688; Garnick (Altria) Tr. 1586).

721. In April 2017, at Altria's request, the first exploratory conversation took place at JLI's headquarters in San Francisco, California. The attendees at that meeting included Altria's Jody Begley (then-President of Nu Mark) and Crosthwaite and JLI's cofounder James Monsees and then-CEO Tyler Goldman. (PX7022 (Begley (Altria) Dep. at 152-53)). Subsequently, Altria senior management wanted to meet with JLI. (PX7001 (Devitre (Altria) IHT at 49)).

722. Senior leaders from both Altria and JLI met in late July 2017. The meeting was attended by Riaz Valani and Zach Frankel, both members of JLI's Board, and Isaac Pritzker, the son and business partner of JLI Board member and investor Nicholas Pritzker. Howard Willard, then COO, and Billy Gifford, then CFO, attended on behalf of Altria. (Valani (JLI) Tr. 902; RX1459 (JLI) at 001-02; *see also* PX1284 (Altria) at 018).

723. According to notes of the meeting referenced in F. 722, Altria suggested that "there may be an opportunity where the two [companies] working together is highly complementary[.]" Specifically, Altria could help with distribution, brand development, and "FDA + regulatory engagement [and] gov't affairs org[.]" (RX1459 (JLI) at 003).

724. In August 2017, Altria leadership informed Altria's Board of Directors that the company was pursuing an investment in JLI, stating that senior leaders had met with "key . . . investors" in JLI (then called Pax) and that JLI likely "favor[ed] a minority investment." (PX1284 (Altria) at 018, 020).

725. Altria and JLI leadership met in December 2017 at Altria's offices in Richmond, Virginia. Nicholas Pritzker joined Valani on behalf of JLI. Willard and Gifford represented Altria. (Pritzker (JLI) Tr. 772; PX1250 (Altria) (Project Tree Investor Presentation)).

726. During the December 2017 meeting between Altria and JLI, Altria highlighted Altria's "Regulatory Capabilities," noting the "complexity" of a PMTA, what Altria viewed to be the necessary PMTA components and studies, and Altria's experience with product submissions and interacting with the FDA. (PX1250 (Altria) at 005, 026-27). Pritzker found Altria's indication that it could be helpful with regulatory matters such as PMTAs an "intriguing idea." (Pritzker (JLI) Tr. 775-76).

727. As of the December 2017 meeting between Altria and JLI, Altria was proposing to buy 100 percent of the domestic side of JLI for between $4 and $5 billion. (Pritzker (JLI) Tr. 772-75).

728. For JLI, Altria's valuation of JLI's domestic business to be between $4 and $5 billion was a "non-starter" because JLI was "growing very quickly, and cigarette volumes were declining." (Pritzker (JLI) Tr. 781-82).

729. Prior to April 2018, discussions between JLI and Altria were "general" and "unstructured," with a focus on Altria's learning more about JLI's business and understanding how a deal might be structured to work together. (PX7031 (Willard (Altria) Dep. at 138-39); *see also* Pritzker (JLI) Tr. 775-76).

4. April/May 2018 Discussions

730. In spring 2018, Altria and JLI began to discuss potential structures for a deal. (PX2026 (JLI) at 001-04; Pritzker (JLI) Tr. 777).

731. Altria "typically like[s] control of the company," and negotiations in April and May 2018 were focused on whether Altria would acquire a majority of JLI's domestic business. (Gifford (Altria) Tr. 2762-63).

732. By April 2018, Altria had dropped its proposal to obtain 100 percent of JLI's domestic business. (Pritzker (JLI) Tr. 779-80).

733. On April 5, 2018, Pritzker, Valani, and Burns traveled to Richmond, Virginia and met with Willard and Gifford at Altria headquarters. (Pritzker (JLI) Tr. 777; PX2297 (JLI) at 001; PX2298 (JLI) at 001).

734. At the April 5, 2018 meeting between Altria and JLI, Altria outlined a concept in which it would buy 40 percent of JLI's U.S. business initially and then, following FTC approval, purchase an additional 10.1 percent, for a total of 50.1 percent ownership. (Pritzker (JLI) Tr. 780-81; *see also* PX2026 (JLI) at 002-03).

735. Altria and JLI negotiators did not have any discussions about what Altria would do with its existing e-cigarette products until after Altria moved away from seeking to purchase 100% of JLI and toward a partial acquisition. (PX7021 (Pritzker (JLI) Dep. at 64-65)).

736. On April 20, 2018, JLI sent Altria a letter proposing general terms for a potential transaction structure that was discussed at the April 5, 2018 meeting. The letter was prepared by JLI's legal counsel and sent by Burns. (PX2026 (JLI); Pritzker (JLI) Tr. 777-79, *see also* Tr. 789 ("[L]awyers drafted all the letters and term sheets.")).

737. As summarized in the April 20, 2018 letter, Altria would acquire 50.1 percent of JLI's U.S. business in two steps. Altria initially would purchase a 40 percent non-voting ownership stake for $6.4 billion, with an expectation that no filing would be required

under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 ("HSR"). "Promptly following [Altria's] initial $6.4 billion investment, Altria would seek regulatory approval to obtain a 50.1% . . . ownership interest in [JLI] via an additional $1.6 billion capital investment (for a total of $8.0 billion)." (PX2026 (JLI) at 003; Pritzker (JLI) Tr. 778-81). Following "regulatory approvals," the previously acquired non-voting equity would convert to voting equity. (PX2026 (JLI) at 002; *see also* Pritzker (JLI) Tr. 780-81).

738. Under the structure summarized in JLI's April 20, 2018 letter, in addition to the $8 billion payment for equity in JLI, JLI would receive $1 billion from Altria upon receipt of regulatory approval of its PMTA for JUUL, for a total investment by Altria of up to $9 billion for 50.1 percent of JLI's domestic company. (PX2026 (JLI) at 003 & n.1; Pritzker (JLI) Tr. 781).

739. For governance provisions, JLI proposed in its April 20, 2018 letter that JLI would continue operating "on a stand-alone basis," including "equal board representation," and "management selection by non-Altria directors," among other rights. (PX2026 (JLI) at 004). In addition, JLI wanted to remain "free to complete an IPO or otherwise raise equity" without any input or consent by Altria, notwithstanding Altria's majority stake. (PX2026 (JLI) at 004).

740. The April 20, 2018 letter proposed that JLI's and Altria's respective antitrust counsel "would discuss and develop a plan with respect to seeking and obtaining regulatory approval for the majority investment, including the treatment of any competitive products owned by Altria." (PX2026 (JLI) at 003).

741. JLI understood from the outset of discussions with Altria that a transaction such as that being contemplated by JLI and Altria "would be closely scrutinized by regulatory agencies, and that antitrust counsel would have to be brought in . . . to optimize the chance" for regulatory approval. (Pritzker (JLI) Tr. 783-84).

742. Pritzker's "assumption [was that] the FTC would most likely require divestiture" of any competitive products of Altria's. (Pritzker (JLI) Tr. 785-86).

743. In the weeks following JLI's April 20, 2018 letter to Altria, Altria and JLI had "several conversations" and Altria sent JLI two letters. As Pritzker described it, there was "back-and-forth, [but] it was not really leading anywhere." (Pritzker (JLI) Tr. 792-93; *see also* Gifford (Altria) Tr. 2761 (Talks would heat up, the parties would "find that there were material differences," and talks would "cool off.").

744. Altria responded to JLI's April 20, 2018 proposal letter on May 3, 2018. (PX2184 (JLI)).

745. Consistent with JLI's April 2018 letter, Altria's May 3, 2018 response proposed a 50.1 percent acquisition of the U.S. business made in two phases, along with an additional payment contingent upon receipt of PMTA approval, for a total of up to $9 billion. (PX2184 (JLI) at 002-03).

746. In response to JLI's proposal for $6.4 billion up front, Altria proposed in its May 3, 2018 letter to pay JLI $500 million upfront, in exchange for approximately a three percent ownership interest. Altria proposed that, following antitrust approval, Altria would pay an additional $5 billion and increase its share to 50.1 percent. Altria was willing to offer "up to" an additional $3.5 billion upon JLI's receipt of PMTA approval, subject to further discussion as to "exact terms for such payment." (PX2184 (JLI) at 002-03).

747. With respect to governance provisions, in its May 3, 2018 letter, Altria rejected the possibility of having its 50.1 percent interest included in any future IPO and also insisted on being able to appoint a majority of JLI's Board of Directors. (PX2184 (JLI) at 003-04).

748. After a conversation between Altria and JLI negotiators on May 23, 2018, Altria sent a letter to JLI on May 30, 2018. (RX1402 (JLI)).

749. In Altria's May 30, 2018 letter, Altria offered JLI a $6.4 billion upfront payment, as requested by JLI in its April 20, 2018 proposal, in exchange for an initial 40 percent interest in JLI's U.S. business, followed by an additional $1.6 billion in exchange for increasing Altria's share to 50.1 percent voting equity, after clearance of the deal by antitrust regulators. Altria further proposed an additional payment to JLI of between $1 to $3 billion upon receipt of PMTA approval of JUUL, depending on JLI's earning performance at that time. This approach offered the potential for JLI receiving a total of up to $11 billion for 50.1 percent of the company. (RX1402 (JLI) at 002-03).

750. During the April and May 2018 time period, JLI and Altria were "not very close" on their views of JLI's valuation. Around the April 2018 time period, JLI's revenue was growing by approximately 30 percent per month. (Pritzker (JLI) Tr. 782-83). JLI believed that Altria's valuations of JLI "always seemed to be a little bit behind the curve." By the time Altria would propose a number, "the value of JUUL had jumped ahead of that" number. (Pritzker (JLI) Tr. 783).

751. On the issue of corporate control, in the weeks after JLI's April 20, 2018 letter, JLI had decided that it was "going to be unable or unwilling to do a transaction where Altria either had control or had a path to control of JLI." (Pritzker (JLI) Tr. 792-93).

752. In the spring of 2018, there were "heavy conversations going back and forth" between the companies regarding how JLI could spin off its international business so that Altria could invest in only JLI's U.S. business. (Gifford (Altria) Tr. 2762-63). JLI had "an increasing concern" as to "how cumbersome it would be to try to actually divide" JLI into domestic and international companies and whether "the value of the international company [would] be diminished in a transaction where the two were split." (Pritzker (JLI) Tr. 783).

5. July and August 2018 Negotiations

a. Background

753. On July 18, 2018, JLI's Goldman Sachs adviser Peter Gross called Altria CEO Willard and indicated that a major company was "willing to buy a minority stake" in JLI "at a $25 [billion] valuation." (PX3183 (Altria) at 001).

754. As of mid-July 2018, JLI was in negotiations with British American Tobacco, Reynolds' parent company, about a possible investment. (PX7035 (Masoudi (JLI) Dep. at 27); *see also* PX8008 (Huckabee (Reynolds) Decl. at 002 ¶ 5)).

755. On or around July 23, 2018, Altria was prepared to accept a minority investment in JLI and was contemplating a $13 billion investment for a 49.9 percent stake in JLI's U.S. business. (PX3169 (PWP) at 001).

756. Altria decided to accept a minority investment in JLI for three reasons: (1) due to JLI's "stellar performance in the marketplace," JLI investors were "unwilling to transact at valuation levels" Altria was proposing"; (2) there was "credible" interest from "a competing bidder that is open to a minority stake"; and (3) "the market is squarely convinced that every company competing in U.S. combustibles has a JUUL problem." (PX4347 (Altria) at 002 (Draft notes for a July 31, 2018 Altria Board of Directors call)).

757. On July 24, 2018, Altria's PWP adviser, Wappler, emailed Willard and said he received the update that Willard was planning to speak to JLI adviser Gross regarding JLI's valuation. Wappler's email included some valuation-related discussion topics for Willard to consider covering with Gross. (PX3170 (PWP) at 001).

758. Prior to July 27, 2018, JLI and Altria discussed the treatment of Nu Mark's existing e-vapor products if Altria made a partial investment in JLI, "in the context of understanding that [such an investment] would require regulatory oversight[.]" (Pritzker (JLI) Tr. 683).

759. On July 27, 2018, in an email to Pritzker regarding potential terms to offer Altria, JLI's Goldman Sachs adviser Peter Gross wrote: "One additional note – I was under the impression that [Altria] would just shut down Mark 10. We don't want them thinking that they will receive any consideration for co[n]tributing it" to JLI. Pritzker responded, "I think they may need to sell it." (PX2330 (JLI) at 001).

760. By July 2018, Altria realized that JLI was unlikely to agree to "a deal that include[d] a pathway to control" for Altria. (PX4347 (Altria) at 002).

b. July 30, 2018 Term Sheet

i. Overview

761. On July 30, 2018, JLI sent a term sheet to Altria summarizing terms for a potential transaction ("July 30 Term Sheet"). In the email attaching the term sheet, JLI's Pritzker confirmed plans for Pritzker, Valani, Burns, Willard, and Gifford to meet at the Park Hyatt Hotel in Washington, D.C. on August 1, 2018. (PX1300 (Altria) at 001; Pritzker (JLI) Tr. 704).

762. The July 30 Term Sheet was the first term sheet exchanged between JLI and Altria. (Pritzker (JLI) Tr. 804).

763. The July 30 Term Sheet contemplated that Altria would purchase 45 percent of JLI's U.S. business in exchange for five percent of the voting power. Altria would obtain voting power via converting its initial non-voting stock, "upon receipt of Antitrust Clearance." (PX1300 (Altria) at 002-03).

764. Gifford found the ownership and control terms in JLI's July 30 Term Sheet "appalling," explaining that "you give all of this money to get an economic interest and you really only have 5 percent of the say." (Gifford (Altria) Tr. 2764-65).

ii. Antitrust Clearance Matters

765. The July 30 Term Sheet included two provisions that addressed the contemplated investment's implications for Altria's e-vapor product portfolio after the transaction took place. (PX1300 (Altria) at 004-06). The first of these provisions proposed steps for obtaining HSR clearance (or "antitrust clearance") for the transaction from the FTC. (PX1300 (Altria) at 004-05). The second of these provisions proposed a non-compete provision regarding Altria's e-vapor assets, with a carve-out for Altria's MarkTen and Elite products until antitrust clearance was achieved. (PX1300 (Altria) at 005-06).

766. The July 30 Term Sheet addressed the treatment of Altria's e-vapor products in connection with regulatory approval for the contemplated transaction as part of a section directed at "Antitrust Clearance Matters," stating:

> Promptly and in no event later than nine months following the Purchase, subject to the license [granted to JLI for Altria's non-trademark intellectual property in e-vapor], Richard [Altria] will divest (or if divestiture is not reasonably practicable, contribute at no cost to Jack [JLI] and if such a contribution is not reasonably practicable, then cease to operate), all Richard [Altria] assets relating to the Field[42] in the U.S., including all electronic

[42] For purposes of the parties' negotiations, the "Field" was defined as "vapor-based electronic nicotine delivery systems." (PX1300 (Altria) at 004).

> nicotine delivery systems and products it acquired, developed, or has under development.

(PX1300 (Altria) at 005).

767. Under the "contribute" proposal in the July 30 Term Sheet, Altria would "sell or grant to JLI" its e-vapor products, and "JLI would operate them or do something with them," if required by the FTC. (Pritzker (JLI) Tr. 690).

768. "[T]he notional concept of 'cease to operate' [in the July 30 Term Sheet] was meant to be a sort of fail-safe if the other options had been exhausted." "[T]his was all in the context of it being done under the sanction of the regulator, was the intent." (Valani (JLI) Tr. 917-19).

769. Regarding the divest/contribute/"cease to operate" provision in the Antitrust Clearance Matters section of the July 30 Term Sheet, Valani explained that "it was important to JLI that if . . . [Altria] were to be a material equity holder" in JLI, that Altria not also sell products of its own to compete with JLI because, if the transaction went forward, Altria "would be privy to a lot of detailed commercial product and technology information that, you know, could prejudice JLI." The language was "driven by legal counsel's views on the different ways in which that could be achieved, subject, of course, to the sanction of the regulator." (PX7032 (Valani (JLI) Dep. at 49)).

770. Pritzker's view was that, "[in] a kind of transaction where Altria would have access to data or proprietary information of JLI, it would be unacceptable for Altria to be in a position to use that information to compete against JLI, but that the process would be overseen by the FTC, and that I expected the FTC would likely require a divestiture of existing products." (Pritzker (JLI) Tr. 673-74). "[I]f [Altria] would be on [JLI's] board, they would have access to information. If they were to be providing services to the company, they would be in a position to know – have inside information. That was my concern." (Pritzker (JLI) Tr. 674-75).

771. The Antitrust Clearance Matters section of the July 30 Term Sheet required that both parties would use "reasonable best efforts to seek Antitrust Clearance for a period of at least nine months after the Purchase." It further provided that during the antitrust clearance process, both parties would "cooperate with the FTC and agree to the reasonable concessionary requirements of the FTC in connection with changes in [Altria's] non-combustible reduced-risk products business." (PX1300 (Altria) at 005).

772. It was important for JLI to obtain assurances from Altria that "at the end of the FTC process, if the FTC required anything of Altria, even something that was concessionary in nature, like a potential divesting of products, that [Altria] would agree to those things" and that Altria would not be able to "walk away from the deal because of concessionary requirements." (Pritzker (JLI) Tr. 817-18). JLI "needed to make sure that Altria would, in fact, be willing to sell those products in the marketplace for whatever they could get for

those products at the requirement of the FTC or anything else the FTC would require, for that matter." (Pritzker (JLI) Tr. 811).

773. The divestiture/contribution/"cease to operate" provision in the Antitrust Clearance Matters section of the July 30 Term Sheet was "[n]ot at all" intended to describe an obligation, or something Altria would do before Altria had a transaction with JLI. (Pritzker (JLI) Tr. 815; PX1300 (Altria) at 004-05).

iii. Richard Support Obligations/Non-compete

774. The July 30 Term Sheet contained a proposed non-compete provision in a section titled "Richard Support Obligations." This section detailed various support services that JLI proposed Altria would provide to JLI, such as regulatory assistance with JLI's PMTA applications. (PX1300 (Altria) at 005-06).

775. The non-compete provision proposed in the July 30 Term Sheet stated:

> Richard agrees, for so long as it owns at least 5% of Jack's outstanding shares, to refrain from competing anywhere in the world in the e-vapor business (other than with respect to MarkTen and MarkTen Elite prior to their divestiture or contribution as described above).

(PX1300 (Altria) at 006).

776. JLI proposed the non-compete provision in the July 30 Term Sheet because, in providing the services contemplated by the Richard Support Obligations section of the July 30 Term Sheet, Altria "would be privy to [JLI's] technology, trade secrets, data," and other business information that would "work to the detriment of JUUL" if Altria were to "apply that information to [Altria's] own product portfolio." (Pritzker (JLI) Tr. 821).

777. The "goal" of the carve-out from the non-compete provision for MarkTen and MarkTen Elite prior to their divestiture or contribution "was for those [products] to stay in the marketplace until the FTC ruled on what would happen to them." (Pritzker (JLI) Tr. 692).

778. JLI believed that how the contemplated transaction handled Altria's existing products "would be scrutinized by the FTC, [and] that [they] would want to make a decision as to what would happen to them." JLI intended for the carve-out from the non-compete provision for MarkTen and MarkTen Elite prior to their divestiture or contribution to "allow Altria to keep those products on the market" until the FTC made its decision. (Pritzker (JLI) Tr. 822; Pritzker (JLI) Tr. 895-96 (Pritzker "knew that anything dealing with existing products was going to be subject to FTC review.")).

779. Altria believed that a transaction with JLI would require HSR review and that the FTC would determine how Altria's products would ultimately be handled. (Willard (Altria) Tr. 1400-01).

780. JLI was not concerned about competition from Altria's then-existing products, but feared that Altria would "use information [it was] getting from [JLI] to be able to enhance [its] product or develop new products that would be injurious to [JLI's] business." (PX7021 Pritzker (JLI) Dep. at 82-83; Pritzker (JLI) Tr. 895).

781. JLI's concern was "how Altria might use information that it would obtain from JUUL after the transaction in order to use JUUL's data and trade secrets against JUUL." JLI "would not have been worried about competition from MarkTen or MarkTen Elite as they were at that time but would have been concerned about changes that might be made to those products" using JLI's information. (Pritzker (JLI) Tr. 895).

c. August 1, 2018 Meeting

782. On August 1, 2018, Willard and Gifford from Altria met with Pritzker, Valani, and Burns from JLI at the Park Hyatt Hotel in Washington, D.C. ("August 1 Meeting"). (Willard (Altria) Tr. 1173-74).

783. The August 1 Meeting was not designed to go through the July 30 Term Sheet in detail, but to discuss "some of the most important terms between the two sides, . . . to assess whether or not there was enough common ground to proceed[.]" (PX7031 (Willard (Altria) Dep. at 177-78)).

784. The discussion at the August 1 Meeting was "[t]ense" and focused on issues of control and voting power. (RX1774 (PWP) at 001; PX7011 (Valani (JLI) IHT at 85-87)).

785. The proposal in the July 30 Term Sheet to provide five percent voting power for a 45 percent economic interest was "a huge sticking point." (PX7040 (Gifford (Altria) Dep. at 142-43)). "[I]t basically became a stand-still. [JLI] didn't give, and [Altria] didn't give." (Gifford (Altria) Tr. 2770).

786. At the August 1 Meeting, Pritzker perceived Altria to be "most unhappy" about "[t]he notion of buying 45 percent of the company and getting 5 percent of the vote[.]" (Pritzker (JLI) Tr. 825). Altria also was "not happy about no control." "[T]heir goal was to acquire the company completely at some point, and [JLI was then] making it clear that that was not going to be possible." (Pritzker (JLI) Tr. 826; PX7021 (Pritzker (JLI) Dep. at 107-08)).

787. An email summary of Altria's comments from the August 1 Meeting prepared by Valani does not show any comments regarding the July 30 Term Sheet's proposed non-compete or antitrust clearance provisions relating to disposition of Altria's existing products. (PX2331 (JLI)).

788. Minutes from an August 3, 2018 JLI Board of Directors meeting, at which Pritzker discussed the August 1 Meeting with Altria, make no reference to any discussion of the proposed non-compete or the antitrust clearance provisions. (PX2117 (JLI) at 025-26).

d. August 4, 2018 Term Sheet

789. On August 4, 2018, Pritzker sent Willard a revised proposed term sheet ("August 4 Term Sheet"). (PX2570 (JLI) at 001).

790. Prior to sending the August 4 Term Sheet, Pritzker had a short call with Willard regarding the term sheet. Pritzker suggested in the call that JLI "had taken [its] best shot at responding to [Altria's] concerns[.]" (PX2387 (JLI) at 001).

791. The August 4 Term Sheet included increased voting power for Altria (from five percent to 15 percent, plus a proportion of Altria's additional shares), the addition of an Altria-appointed non-voting observer of JLI's Board prior to receiving HSR clearance, and other terms related to control. (PX2570 (JLI) at 002-03 (voting power), 007 (observer)).

792. The divest/contribute/"cease to operate" provision in the Antitrust Clearance Matters section of the August 4 Term Sheet was unchanged from the July 30 Term Sheet. (PX2570 (JLI) at 005-06).

793. JLI's August 4 Term Sheet inserted the word "shutdown" to the non-compete provision in the July 30 Term Sheet. While the non-compete provision in the July 30 Term Sheet carved out "MarkTen and MarkTen Elite prior to their divestiture or contribution as described above," the non-compete provision in the August 4 Term Sheet carved out "MarkTen and MarkTen Elite prior to their divestiture, shutdown or contribution as described above." (PX2570 (JLI) at 007).

794. Pritzker did not remember why the "shutdown" term was added to the August 4 Term Sheet and denied it had been a subject of his discussions with Altria. Pritzker "believe[d] the lawyer that drafted [the August 4 Term Sheet] wanted to make this draft compatible" with the divest/contribute/"cease to operate" language in the Antitrust Clearance Matters section. (Pritzker (JLI) Tr. 829-30).

795. The August 4 Term Sheet was the last proposed term sheet to make any reference to "cease to operate" or "shutdown" and those terms did not appear in any subsequent draft term sheet, draft deal document, or in the final agreement. (*See* PX1432 (Altria) at 021-22, 024 (Aug. 19 term sheet); PX1269 (Altria) at 006-07, 008-09 (Oct. 15 term sheet); PX2503 (JLI) at 026-28, 030 (Oct. 28 term sheet); RX0285 (Altria) at 021-22, 024 (Oct. 30 term sheet); RX0838 (Altria) at 327-28, 373 (Nov. 15 draft purchase agreement); PX2141 (JLI) at 036-37 (Dec. 20 final purchase agreement)).

796. Kevin Burns, one of JLI's principal negotiators, did not recall JLI and Altria ever discussing "ceasing to operate" after the "cease to operate" language was removed after the August 4 Term Sheet. (PX7025 (Burns (JLI) Dep. at 207-08)).

e. Draft Talking Points for JLI/Altria Telephone Call

797. On August 5, 2018, Altria in-house attorney Carmine Reale sent Willard, Garnick,

Gifford, and Crosthwaite a set of draft talking points for a planned call between Altria and JLI. ("August 5 Draft Talking Points"). The draft talking points were prepared by Altria's adviser PWP, and incorporated edits suggested by Reale. (PX1390 (Altria)).

798. It was not unusual for talking points to be prepared for Willard in advance of meetings, including some meetings with JLI, by members of Altria's team who wanted to "provide their perspective on what they would say if they were in the meeting." Willard would "incorporate anything [he] thought was helpful and obviously leave out anything that [he] didn't think was appropriate." (Willard (Altria) Tr. 1179-80). Such notes or draft scripts were "rarely what [Willard] actually said at the meetings." (Willard (Altria) Tr. 1405).

799. The focus of the planned call between Altria and JLI was to address what the August 5 Draft Talking Points referred to as a "foundational issue." The draft talking points stated:

> [T]here is one point that I wanted to discuss today because we consider it foundational. . . and it probably doesn't make sense to negotiate the other terms unless we agree on this particular item. The current term sheet assumes that the non-Altria shareholders can sell [JLI] without Altria's approval. If a 3rd party bidder approaches, the current draft assumes we would have the right to make an offer to acquire Jack, but would have no other protections beyond that. That's highly problematic for us." (PX1390 (Altria) at 003) (ellipsis in original).

(PX1390 (Altria) at 003).

800. The August 5 Draft Talking Points explained Altria's position on the foundational issue described in F. 799 as follows:

> If we establish this partnership, then we expect that Altria will: accelerate Jack's growth, contribute meaningful synergies, potentially exit our own vapor business, and cannibalize our own combustible business - and then could potentially be forced to sell our stake in Jack to a 3rd party, at a valuation to a large degree the result of our various contributions to Jack.

(PX1390 (Altria) at 003).

801. The August 5 Draft Talking Points stated that Altria needed to approve any sale of JLI's post-investment share of the business "to a strategic competitor. Likewise, we need to have Altria approve any sale of 100% of [JLI] to any 3rd party buyer (strategic or otherwise)." (PX1390 (Altria) at 003).

802. The August 5 Draft Talking Points defended Altria's proposal described in F. 801, noting that the proposal would not affect JLI's ability to pursue an IPO and "would also enable [JLI] to pursue any/all strategic alternatives related to the international business . . . ." (PX1390 (Altria) at 003).

803. The August 5 Draft Talking Points stated:

> I think you'll agree that Altria has come a long way to accommodate you in this process, including:
>
> - Meeting your requested valuation of $28 billion ($12.6 billion for 45%, US only, with Altria's operational support commencing immediately upon closing)
>
> - Agreeing to a minority stake instead of a controlling position
>
> - [Demonstrating flexibility with our existing vapor business, if necessary, in order to form the partnership]

(PX1390 (Altria) at 003-04) (brackets in original).

804. On August 6, 2018, Garnick circulated his comments on the August 5 Draft Talking Points. Garnick's version omitted the bracketed bullet point language set forth in F. 803. Garnick also changed the description of JLI's proposal to allow non-Altria shareholders to sell JLI without Altria's approval from "highly problematic" to "unacceptable" and a "deal breaker." (PX1304 (Altria) at 003; *compare* PX1390 (Altria) at 003).

805. Garnick's August 6, 2018 revised draft talking points added language at the conclusion of the document, stating:

> [W]e hope that you will carefully consider this request. If you're able to accommodate us, then we stand ready to meet with you immediately and work night and day to hammer out a deal, if that is what it takes. However, if you're unable to meet our ask on this point, then it[']s time to break off these discussions, shake hands, and agree to be competitors.

(PX1304 at 003; *compare* PX1390 (Altria) at 003). Garnick explained that "once there was HSR approval, we [Altria and JLI] would not have been competitors. So we were talking about a partnership that, with HSR approval, would have changed our status as competitors" and that the language "agree to be competitors" was shorthand for "continue being competitors." (PX7036 (Garnick (Altria) Dep. at 57-58)).

806. Garnick's August 6 revisions to the August 5 Draft Talking Points did not change the language referenced in F. 800 ("If we establish this partnership, then we expect that Altria will: . . . potentially exit our own vapor business . . . "). (PX1304 (Altria) at 003; *compare* PX1390 (Altria) at 003).

807. On August 6, 2018, Willard and Gifford called Pritzker and Valani. Willard "indicated that [Altria] need[ed] to approve any potential sale of Tree in the future (*i.e.*, not a [right of first refusal] – [Willard] indicated that [Altria] need[ed] to approve any sale

transaction). Pritzker said he understood [Willard's] concern and would get back to [Altria] tomorrow." Pritzker "also indicated that, assuming [the parties] could agree on a path forward," JLI wanted to meet "asap and negotiate the rest of the term sheet." (PX2312 (JLI); PX3202 (PWP) at 001).

f. August 9, 2018 Term Sheet

808. On August 9, 2018, Altria sent JLI its first proposed term sheet ("August 9 Term Sheet"), which was a mark-up of the August 4 Term Sheet. (PX2313 (JLI) at 001).

809. Altria proposed in the August 9 Term Sheet that Altria would purchase a 45 percent stake in JLI's U.S. business and receive 35 percent of the voting power. (PX2313 (JLI) at 012-13).

810. Altria's August 9 Term Sheet retained JLI's language that both parties would use "reasonable best efforts to seek Antitrust Clearance," with Altria adding that the "details related to such efforts" were "to be discussed by the parties." The term sheet also retained JLI's language requiring Altria to "cooperate with the FTC and agree to the reasonable concessionary requirements of the FTC" in connection with changes in Altria's e-vapor business. However, Altria struck the entire divestiture/contribution/"cease to operate" provision, and in its place proposed that Altria would exclusively license its e-vapor assets to JLI upon HSR approval. (PX2313 (JLI) at 014-15; Pritzker (JLI) Tr. 840-42).

811. Altria's August 9 Term Sheet revised the non-compete provision to state as follows:

> Richard agrees to refrain from competing anywhere in the U.S. in the e-vapor business (other than with respect to existing and under development products prior to the non-trademark [intellectual property ("IP")] license as described above). The non-compete will terminate upon the earliest of (i) failure to receive Antitrust Clearance, (ii) the expiration of the Services Term and (iii) if Richard ceases to own at least 20% of Jack's outstanding shares[.]

(PX1303 (Altria) at 017).

812. Altria's August 9 revision to the non-compete provision (F. 811) retained the exception carved out for MarkTen and MarkTen Elite with the language about "existing" products and expanded it to include "under development" products. (Pritzker (JLI) Tr. 844).

g. August 15, 2018 JLI Issues List

813. On August 14, 2018, Pritzker wrote to Willard and Gifford:

> Howard/Billy: let's tentatively schedule a meeting in SF [San Francisco] Saturday [August 18, 2018] . . . . Tomorrow night or Thursday morning we will be sending you our position on a number of specific points to make sure

> you . . . understand where we will need to draw the line before finalizing a commitment to meeting. . . .

(PX2025 (JLI) at 001).

814. On August 15, 2018, Devitre, who had been meeting with Valani, transmitted to Willard and Gifford a two-page bulleted list of JLI's issues to be discussed at the planned meeting in San Francisco, California on August 18. (PX1012 (Altria) at 001) (the "August 15 Issues List"); PX7001 (Devitre (Altria) IHT at 93-95); Valani (JLI) Tr. 928-32 (discussing PX4171 (JLI) at 001)).

815. The August 15 Issues List was an effort to clarify JLI's position and to communicate clearly that these were foundational concepts on which JLI was looking for alignment with Altria. (Valani (JLI) Tr. 929-32; *see also* (Pritzker (JLI) Tr. 711) (acknowledging that he wanted to send JLI's position on certain points so Altria would know some basic conditions that JLI had for a potential transaction).

816. The August 15 Issues List contained eight substantive bullet points, most of which related to control and governance. The first bullet stated: "We understood that you could accept not having a path to control except through a confidential offer which would be subject to approval by the non-Richard directors and stockholders. The following are inconsistent with that and are not acceptable to us" – and proceeded to list, among other issues, Altria's proposed right of first refusal on additional stock issuances, its proposal for 45 percent voting power with at least 35 percent discretionary voting rights, and its proposed composition of seats on JLI's Board of Directors. (PX1012 (Altria) at 002) (stating, among other issues, that Altria's proposed valuation calculation was "not acceptable to [JLI]"; proposed indemnity provision was "not a topic for discussion"; and Altria must agree to restrictions on its ability to transfer shares: "We need you to commit to stay in the stock as a partner for the long term[,] [which] is inconsistent with the lack of meaningful transfer restrictions in your draft.")).

817. The second bullet point on the August 15 Issues List stated:

> We understood that you (and your successors and current and future affiliates) would not compete against us in vapor in the US and that JUUL would be the vehicle for all vapor assets. You have retained the right under certain circumstances to compete not only with existing Mark Ten products, but also with products under development and future products. The commitment to divest Mark Ten has been stricken. This is not acceptable to us.

(PX4171 (Altria) at 002).

818. The August 15 Issues List made no mention of Altria's having stricken in its August 9 Term Sheet the "cease to operate" language that had been included in the August 4 Term Sheet. (PX1012 (Altria)).

819. Valani explained the second bullet point in the August 15 Issues List: "[W]e did not feel like it was appropriate, natural, normal under any circumstances for a party that had access to all of our proprietary information to be – to be competing in markets, particularly in situations where they could use our own information for their own benefit." (Valani (JLI) Tr. 933-34).

h. August 18, 2018 Meeting

820. Altria and JLI, together with their respective outside counsel, met on August 18, 2018, at the offices of Pillsbury Winthrop Shaw Pittman ("Pillsbury") in San Francisco, California ("August 18 Meeting"). (Willard (Altria) Tr. 1403-04; PX1333 (Altria) at 001; PX2400 (Altria) at 001). Pillsbury was outside counsel for JLI. (Garnick (Altria) Tr. 1744; Willard (Altria) Tr. 1403; *see also* PX7040 (Gifford (Altria) Dep. at 152) ("All of the meetings in San Francisco were at the Pillsbury offices.")).

821. On August 17, 2018, Altria's outside counsel prepared and sent to Willard a "Notes/Outline" document for the August 18 Meeting. The four-page bulleted list addressed a variety of topics relating to JLI's August 15 Issues List. A bullet point under an "opening remarks" section stated:

> - Some of the points you flagged in the document sent Wednesday also seem to boil down to miscommunication rather than substantive disagreement
>
> § For example, our approach on MarkTen was driven by antitrust and for the protection of both companies. Upon receiving antitrust approval, we would contribute MarkTen to Jack and become subject to a robust non-compete that makes Jack our exclusive e-vapor play. We can't agree to these terms under antitrust laws prior to receiving HSR approval, which was driving our clarifications in the term sheet[.]

(PX1493 (Altria) at 002).

822. Willard believes it would be "incorrect" to suggest that the August 17 "notes/outline" document prepared for Willard constituted a record of what was said at the August 18 Meeting. (Willard (Altria) Tr. 1405-07).

823. At the August 18 Meeting, "progress was starting to be made." However, Altria and JLI "were very significantly apart" on JLI's valuation. (Pritzker (JLI) Tr. 845-46).

824. At the August 18 Meeting, Altria and JLI discussed voting power and whether the potential investment would be in JLI's domestic business only or also include the international business. (Gifford (Altria) Tr. 2772). Pritzker remained concerned that splitting JLI for purposes of the transaction would "create a mountain of problems for the company in the future." (Pritzker (Altria) Tr. 845-46).

825. Willard did not recall the treatment of Altria's e-vapor products being a topic of the discussions between the senior group of negotiators at the August 18 Meeting. (Willard (Altria) Tr. 1218-19).

i. August 19, 2018 Term Sheet

826. By mid-August 2018, Altria and JLI arrived at an understanding with regard to the antitrust clearance and non-compete issues for the potential transaction. As Garnick, Altria's counsel, explained: "[T]here was a recognition that after HSR approval, [Altria] would be on [JLI's] board and . . . they didn't want us also to be competitors." By mid-August, there was a "resolution that [Altria] would remain in the market with our e-vapor products until we obtained HSR approval . . . and then when we obtained HSR approval, [Altria] would contribute our e-vapor products to" JLI. (PX7036 (Garnick (Altria) Dep. at 53)).

827. Garnick, Altria's counsel, explained: "[O]nce [Altria] fully understood what [JLI's] position was and the reason for it, we could understand it and we had some agreement, some sympathy for it, and that's why we thought we could live with a carve-out provision [from the non-compete] that allowed us to stay in the market until we got HSR approval and, at that point, we would get board seats, we would have more operational involvement into [JLI], and that would be an appropriate time for us to contribute our e-vapor products to [JLI]." (PX7036 (Garnick (Altria) Dep. at 54)).

828. On August 19, 2018, JLI sent proposed revisions to Altria's August 9 Term Sheet ("August 19 Term Sheet"). (PX1432 (Altria) at 001).[43]

829. JLI proposed in the August 19 Term Sheet that Altria would purchase a 45 percent stake in JLI's U.S. business and receive 20 percent of the voting power – a decrease from the 35 percent Altria proposed in the August 9 Term Sheet. (PX1432 (Altria) at 017-18).

830. With respect to Antitrust Clearance Matters, the August 19 Term Sheet maintained the requirements from prior term sheets that the parties "cooperate with the FTC" and "use reasonable best efforts to seek Antitrust Clearance," and that Altria "agree to the reasonable concessionary requirements of the FTC in connection with changes in [Altria's] e-vapor business." (PX1432 (Altria) at 022).

831. With respect to treatment of Altria's existing e-vapor business in the August 19 Term Sheet, JLI revised the Antitrust Clearance Matters section to propose that Altria would contribute those assets to JLI upon receiving regulatory approval of the transaction, and if such approval was not received, Altria would divest the assets. The term sheet stated:

> [Altria] will contribute, upon receipt of Antitrust Clearance and at no cost to [JLI], all [Altria] assets relating to the Field in the U.S., including all

[43]At trial, the August 19 Term Sheet was occasionally referred to as the "August 18 Term Sheet" (reflecting the draft stamp on the document). (Pritzker (JLI) Tr. 847).

> electronic nicotine delivery systems and products it acquired, developed or has under development (in each case to the extent it has the legal right to make such contribution). In the event Antitrust Clearance for the foregoing contribution is not obtained within nine months after the Purchase, then subject to the [IP license granted to JLI concurrent with Altria's purchase] referenced above, [Altria] will divest all such [Altria] assets relating to the Field in the U.S. within six months thereafter.

(PX1432 (Altria) at 021-22).

832. The August 19 Term Sheet did not state or contemplate that Altria would cease to operate its existing e-vapor business, either before or after HSR clearance. (PX1432 (Altria) at 021-22).

833. Nothing in the August 19 Term Sheet suggested that Altria would, or was expected to, take any action with regard to its e-vapor products before any transaction with JLI or before the FTC had a chance to review that transaction. (Pritzker (JLI) Tr. 853-54).

834. With respect to the services JLI wanted Altria to provide as part of the contemplated transaction ("Richard Support Obligations"), in the August 19 Term Sheet, JLI distinguished between services Altria "could provide to JLI" immediately upon closing – "while still being a competitor" – and enhanced services that Altria could provide only after HSR clearance. (Garnick (Altria) Tr. 1748; PX1432 (Altria) at 022-23).

835. JLI's proposed non-compete provision in the August 19 Term Sheet stated that Altria would "refrain . . . from competing (or preparing to compete including through research and development activities) anywhere in the world in the e-vapor business (other than with respect to MarkTen and MarkTen Elite prior to their contribution or divestiture as described above)." This revision by JLI rejected Altria's effort in the August 9 Term Sheet to expand the carve-out to include "under development products." (PX1432 (Altria) at 024).

836. In the August 19 Term Sheet, JLI revised the non-compete provision to apply to Altria's "current and future affiliates." (PX1432 (Altria) at 024). This issue – whether a company that acquired Altria in the future would be bound by the non-compete – became known as the "upstream affiliates" issue. (Willard (Altria) Tr. 1431-32).

837. Based on JLI's August 19 Term Sheet, Altria concluded that JLI "had no problem with [Altria's] continuing to compete against them with the products we currently had on the market. What they wanted, though, is for that to stop once we got HSR approval and . . . participated on their board." (Garnick (Altria) Tr. 1750).

j. August 22, 2018 Joint Issues List

838. On August 22, 2018, counsel for Altria and JLI circulated a joint issues list, with each party identifying its positions as compared to the terms of the previous term sheet

circulated on August 19, 2018 (identified in the document as the August 18 Term Sheet) ("August 22 Joint Issues List"). (RX1783 (PWP) at 001; RX1784 (PWP) at 001).

839. Regarding the Antitrust Clearance Matters section of the August 19 Term Sheet, the August 22 Joint Issues List showed consensus on the procedure to be followed: "Upon receipt of antitrust clearance, [Altria] to contribute to [JLI] all [Altria] e-vapor assets at no cost to [JLI]"; and "[i]f antitrust clearance for contribution is not received within nine months, [Altria] to divest e-vapor assets within six months."). Altria wrote, "In general, we do not see any material substantive difference on these antitrust points." (RX1784 (PWP) at 002-03).

840. The August 22 Joint Issues List reflected the parties' mutual understanding that MarkTen cig-a-likes and MarkTen Elite were exempted from any non-compete provision, prior to HSR approval, as provided under the August 19 Term Sheet. The sole reference in the August 22 Joint Issues List to MarkTen and MarkTen Elite is JLI's request that Altria "confirm that except as to MarkTen and MarkTen Elite, non-compete commences on signing." (RX1784 (PWP) at 004).

841. The August 22 Joint Issues List does not reflect any dispute as to JLI's having limited the non-compete carve-out to MarkTen and MarkTen Elite, rather than allowing a carve-out for future product development. Altria accepted JLI's position on the scope of the non-compete in this regard, having determined that JLI's concern that Altria could use inside information to compete against JUUL in the future was not unreasonable. (RX1784 (PWP) at 003-004; PX7031 (Willard (Altria) Dep. at 229-30)).

k. August 27, 2018 Meeting

842. During the August 23 Board meeting, Willard reported that Altria was still in discussions with JLI, and the Board asked that he keep working on the deal. (Willard (Altria) Tr. 1417-18; *see also* PX1344 (Altria) at 003-04). The Board told Altria's leadership to "really look at what were all of the options available to [Altria] to improve how [it was] competing in the e-vapor space," and it said to continue negotiations with JLI to try to make an investment. (Gifford (Altria) Tr. 2797-98).

843. On August 25, 2018, Altria Board member Thomas Farrell called Willard and confirmed that Altria's Board was supportive of moving forward with JLI with one key adjustment to the terms. The Board did not want Altria to sign and close the deal simultaneously, but instead wanted to wait for antitrust approval before transferring payment to JLI. (PX3177 (PWP)).

844. Under a sign-and-close deal structure, Altria would purchase non-voting shares of JLI that would convert to voting shares upon HSR clearance, as opposed to providing a smaller upfront investment pending antitrust review or purchasing voting shares outright following HSR clearance. (Pritzker (JLI) Tr. 859-61).

845. As James Wappler, a partner at Perella Weinberg Partners and Altria's financial advisor, explained sign-and-close transactions: "Oftentimes, in M&A transactions, you sign an

agreement [with] an investor to acquire another company. You await antitrust approval and then you close and wire the funds at the time of close." By contrast, in a simultaneous sign-and-close deal, "you sign, simultaneously close and transfer the money and then seek antitrust approval." (PX7028 (Wappler (PWP) Dep. at 75-76)).

846. On or around August 27, 2018, JLI's Pritzker, Valani, Burns, and JLI's outside counsel met with Altria's Willard, Gifford, and Altria's outside counsel at the offices of Altria's outside counsel, Wachtell, Lipton, Rosen & Katz in New York, New York to try to resolve outstanding issues ("August 27 Meeting"). (PX7032 (Valani (JLI) Dep. at 87-88); PX7036 (Garnick (Altria) Dep. at 47); Willard (Altria) Tr. 1402-03, 1418).

847. The August 27 Meeting "didn't go well" and was "fairly quickly . . . dissolved." (Willard (Altria) Tr. 1418).

848. The August 27 Meeting ended with an impasse. Altria indicated it would not agree to a sign-and-close structure, but instead wanted to pay JLI after HSR approval. JLI indicated this was unacceptable. (PX7036 (Garnick (Altria) Dep. at 48); PX7032 (Valani (JLI) Dep. at 87-89)). JLI did not want to "bear the risk, and that was that." (PX7032 (Valani (JLI) Dep. at 90)).

849. JLI insisted on the sign-and-close structure because it would be "really difficult" for JLI "to enter into a transaction and then wait nine months or more" to find out if it would receive the full investment. As Valani explained, "the company was going to raise capital from somewhere, and if it wasn't Altria, it would have been financial investors. . . . [I]f [JLI] decided on this route, [(the Altria investment)] it almost . . . foreclosed any other options. And so, to foreclose all those other options and to be left in limbo with a lot of explaining to do, in terms of how this is all supposed to work, felt like a very tenuous position for the company to be [in]." (PX7032 (Valani (JLI) Dep. at 88-89)).

l. Impasse

850. On August 28, 2018, the JLI Board concluded that, "in light of the wholly unsatisfactory nature of recent discussions with [Altria]" the negotiations were "highly unlikely to result in an investment by, or strategic relationship with, [Altria]." (PX2117 (JLI) at 031-32). The companies "still were very far apart on what a reasonable price would be," in part because Altria wanted to exclude the international company from the transaction. JLI was also concerned that a 45 percent interest was "too close to 51 percent," as Altria might "somehow figure out how to get a controlling position." (PX7021 (Pritzker (JLI) Dep. at 123-24)).

851. On August 29, 2018, Willard sent a note to Altria's Board stating: "We are still in discussions on the Tree [JLI] Opportunity. We have hit some setbacks and given the unavailability of one [of] the investors for two weeks we will likely have a break in the negotiations. If we have material developments, we will send a note or have a call." (PX4461 (Altria) at 002; PX4462 (Altria)).

852. In late August 2018, the parties "had reached an impasse" in the negotiations, (Garnick (Altria) Tr. 1753), and negotiations "broke down[.]" (Willard (Altria) Tr. 1419).

853. When the negotiations broke off in late August 2018, the upstream affiliates issue (F. 836) had not yet been resolved. (Willard (Altria) Tr. 1432).

854. In September 2018, Altria had internal discussions "from time to time" about the possibility of restarting negotiations with JLI. There were no substantive negotiations between Altria and JLI during this period. (Garnick (Altria) Tr. 1753, 1823).

855. There were no term sheets exchanged and Altria had "no meetings with JLI people" in September 2018. (Garnick (Altria) Tr. 1754-55).

856. At the end of August and into September 2018, Gifford, Altria's then Vice Chairman, believed that a potential deal with JLI "was off." (Gifford (Altria) Tr. 2798).

857. On September 8, 2018, JLI's Strategic Committee, composed of Pritzker and Valani, informed the JLI Board that "[the Committee] was frustrated with the progress that was being made with Altria and recommend[ed] that conversations cease for reasons that are listed" in the Board's meeting minutes. (Pritzker (JLI) Tr. 855-56 (discussing PX2117 (JLI) at 041)). The Committee was concerned about the gap in valuation, the distraction to the company, and the risk that the fact of negotiations would leak and "be reputationally harmful to the company[.]" (Pritzker (JLI) Tr. 856).

858. On September 8, 2018, JLI's Board of Directors heard an update on "certain legal discussions between counsel to the parties." The Board concluded that, "[i]n light of the (i) lack of progress in the negotiations, (ii) the number of remaining, significant, unresolved outstanding issues between the parties, (iii) the ongoing distraction and burden on the Company's management of further negotiations with Richard at a time when the Company was experiencing extraordinary growth, and (iv) the increase in valuation of the Company during the course of its discussions with Richard and its prospects for future growth and further increases in valuation (independent of any transaction with Richard), which were not adequately reflected in the Richard investment offer, . . . the Company should cease discussions of an investment or strategic relationship with Richard." (PX2117 (JLI) at 041; *see also* PX7021 (Pritzker (JLI) Dep. at 130-31) ("[W]e were no longer talking to Altria about the deal . . . [and] we determined at the board [meeting] that this was just not going to happen.")).

859. On September 11, 2018, Devitre and Valani spoke by phone. (PX4374 (Altria) at 006 (Devitre phone records)).

860. In a September 13, 2018 email, Wappler reported that Devitre had spoken with Valani two days earlier to explain that Altria had "a solution to the simultaneous sign/close issue, and [is] prepared to send a revised term sheet," and that Valani indicated that JLI was focused on a tender offer and not interested in additional discussions. (PX3154 (PWP) at 001).

861. By September 11, 2018, JLI had decided to pursue different financing than the Altria investment, and Pritzker "wanted to just get that done and move on." (PX7021 (Pritzker (JLI) Dep. at 132); *see also* PX3154 (PWP) at 001). "[Valani] had communicated to [Devitre, an Altria Board member] that [JLI was] planning on pursuing a different path." (PX7028 (Wappler (PWP) Dep. at 124-25)).

862. On or around September 21, 2018, Altria employees, including Crosthwaite, and Altria's advisers at PWP, had discussions and prepared a presentation regarding the potential implications of the FDA's September 12 Letter (F. 275) for JLI and for elements of the parties' negotiations ("September 21, 2018 Presentation"). (PX4273 (Altria)).

863. A slide from Altria's September 21, 2018 Presentation, setting forth the "[t]op non-value terms for renegotiation," lists "Board Seats," "Voting Stake," and "Exit Terms[.]" Another term mentioned for potential renegotiation, under a catch-all category of "Other" was "Non-compete limited to current and future subsidiaries" – the upstream affiliates issue (*see* F. 836). (PX4273 (Altria) at 013).

864. A slide from Altria's September 21, 2018 Presentation titled "Illustrative pathways" describes various scenarios and potential outcomes, if Altria were to "call Tree" or otherwise attempt to reengage with JLI. (PX4273 (Altria) at 014).

865. Due to the impasse, negotiations remained stagnant through September and into October of 2018, (PX7031 (Willard (Altria) Dep. at 178-79)), and there were no further substantive negotiations after the August 27 Meeting until Willard sent a letter to JLI on October 5, 2018. (Willard (Altria) Tr. 1418-19).

6. October 2018 Negotiations

866. Beginning in October 2018, Altria's strategy for its post-Elite e-vapor business consisted of two simultaneous paths: internal growth teams to try to develop a "leapfrog" product and growth by acquisition of an interest in JLI. (F. 602, 632, 868-947).

867. The likelihood of completing a good acquisition is often uncertain and therefore Altria believed it was necessary to also have an internal strategy. (Willard (Altria) Tr. 1391 ("[T]he thing about acquisitions is, sometimes you find a good one and sometimes you can come to terms, but oftentimes, you can't come to terms, and so you better have an internal strategy.")) Its internal strategy shifted towards Growth Teams. (*See* F. 599-610, 632-644).

a. October 5, 2018 Letter from Altria to JLI

868. On October 5, 2018, Willard sent a letter to JLI, which Altria saw as "one last effort" to re-engage JLI, based on a different deal structure, to "see whether some of these different terms [would be] of any interest to them." ("October 5 Letter"). (PX7031 (Willard (Altria) Dep. at 225-26); *see* PX2152 (JLI)).

869. According to October 4, 2018 notes for a planned call with Altria's Board of Directors, prepared by Garnick, Altria leadership was "[n]ot terribly optimistic" about reaching out to JLI, "but [thought it was] worth a final try." Garnick stated his belief that "[m]ost likely, [JLI] will not make that commitment to engage. We are fully prepared for that." (PX1010 (Altria) at 004).

870. Under the deal structure Altria offered in the October 5 Letter, Altria would acquire a 35% economic and voting interest in the entirety of JLI. Previously, Altria had proposed acquiring a 45% interest of only JLI's U.S. business. The October 5 Letter also proposed that Altria would make the full investment at closing, at which time Altria would receive non-voting shares, with the parties cooperating to seek regulatory approval to convert those shares into voting shares. In addition, Altria would agree to a standstill to prevent it from acquiring additional shares or control of JLI following the investment. (PX2152 (JLI) at 002-003; Pritzker (JLI) Tr. 825-26).

871. JLI viewed the October 5 Letter as a "turning point" because it "solved" several of the items that in earlier negotiations had been matters of dispute between JLI and Altria. Altria's proposals in the October 5 Letter that Altria acquire a 35% interest (instead of 45%), invest in the entire JLI (not just the U.S. business), and agree to pay the full amount at closing, addressed JLI's concerns. (PX7021 (Pritzker (JLI) Dep. at 137-38); *see* Pritzker (JLI) Tr. 857-58; *see also* PX7021 (Pritzker (JLI) Dep. at 118-19) (discussing points that had been "critical" to JLI during the August 2018 time period).

872. By offering "a proposal that would encompass the entire company, [the October 5 Letter] gave the promise that actually [Altria and JLI] could get to an agreement on value." (Pritzker (JLI) Tr. 836).

873. The October 5 Letter proposed terms related to deal structure and control, which were "particularly important to JLI" and which were "different, significantly different than the last deal [Altria and JLI] were discussing." (PX7031 (Willard (Altria) Dep. at 225-26); PX7025 (Burns (JLI) Dep. at 211-12) (explaining that some of the "major points that were changed relative to previous discussions" related to control and "support [of JLI's] mission" through provision of support services).

874. Altria's new proposal contained in the October 5 Letter to acquire 35 percent ownership of JLI "divid[ed] what [Altria] would have preferred and what [JLI] would have preferred, which was less than that." (Pritzker (JLI) Tr. 807; *see also* PX7021 (Pritzker (JLI) Dep. at 138) ("I thought 35 percent was a good faith attempt to reach a number that might be acceptable to both parties . . . .")). JLI "did not want to give up control" but it also wanted the investment to "be meaningful on [Altria's] part," so 35 percent was "the right zip code or area in terms of size." (PX7025 (Burns (JLI) Dep. at 211-12)). By proposing a 35 percent interest, the October 5 Letter "made the likelihood of Altria's getting to a control position less likely" and made the "cash outlay" more feasible for Altria. (Pritzker (JLI) Tr. 836-37).

875. Altria's proposal in the October 5 Letter that Altria would agree to a standstill that would prevent it from acquiring additional shares or engaging in a business combination with JLI was important to JLI because it did not want to "give [Altria] a path to control unless it was [JLI's] desire to give them a path to control," and a standstill meant that Altria "could not edge their way into control by purchasing other shares above the 35 percent level." With the standstill provision, JLI "absolutely knew this was a non-control transaction." (PX7025 (Burns (JLI) Dep. at 212); PX2152 (JLI) at 003).

876. The October 5 Letter proposed that Altria would "provide support services in the U.S. along the lines previously discussed for a term of six years from closing, which would be renewable for successive three-year terms if mutually agreed. If at the end of any term, we did not mutually agree to extend the support services, Altria would nonetheless provide transition services for a reasonable period." (PX2152 (JLI) at 002-03).

877. Term number 6 of the October 5 Letter stated:

> Altria would agree that it and its current and future subsidiaries will not compete, in a manner consistent with our previous discussions, in the U.S. e-vapor market for any period, exclusive of the aforementioned transition period, during which it provides support services.

(PX2152 (JLI) at 003).

878. JLI understood Willard's reference to "our previous discussions" in term number 6 of the October 5 Letter to mean "consistent with [the] prior draft of the term sheets," the most recent of which was the August 19 Term Sheet sent by JLI. (Pritzker (JLI) Tr. 715; *see also* Pritzker (JLI) Tr. 863 (noting that "looking at the last term sheet would be instructive" on the meaning of "our previous discussions" in the October 5 Letter); PX7011 (Valani (JLI) IHT at 118)).

879. After receiving the October 5 Letter, "for the first time in the entire time that [JLI and Altria] been talking," Pritzker believed that the parties "had the outline of a transaction that might be possible." (PX7021 (Pritzker (JLI) Dep. at 137)).

880. On October 10, 2018, the JLI Board, citing the "recent letter received from [Altria] proposing to re-engage in discussions regarding a potential investment and strategic relationship on certain specified terms," authorized Pritzker, Valani, and Burns to "re-engage with [Altria] and to obtain further clarification of its proposal." (PX2117 (JLI) at 052 (JLI Board minutes)).

b. October 15, 2018 Term Sheet

881. On October 12, 2018, Pritzker informed Willard that JLI was amenable to the terms set forth in the October 5 Letter. (RX1265 (Altria) at 007).

882. On October 12, 2018, Willard provided the Altria Board with "an update on [Altria's] ongoing negotiation[s]." He wrote that Altria had "insisted upon a 35% stake in the entire company, both U.S. and international" and that Altria had emphasized to JLI that Altria was "not willing to negotiate" on those matters. Willard told the Board that Altria and JLI "agreed that it made sense for [Altria] to send [JLI] a revised draft term sheet" and that Altria would send JLI the revised term sheet "next week." (PX1350 (Altria) at 001).

883. On October 15, 2018, Altria sent JLI a revised version of the August 19 Term Sheet, reflecting the terms Altria proposed in the October 5 Letter. ("October 15 Term Sheet"). (PX1269 (Altria).

884. Regarding "Antitrust Clearance Matters," the October 15 Term Sheet continued to propose, as did prior term sheets exchanged between Altria and JLI, that both Altria and JLI would "cooperate with the FTC"; "use reasonable best efforts to seek Antitrust Clearance"; and "agree to the reasonable concessionary requirements of the FTC in connection with changes in [Altria's] e-vapor business." (PX1269 (JLI) at 006-07).

885. Regarding treatment of Altria's existing products, the Antitrust Clearance Matters section of the October 15 Term Sheet proposed: "[I]f necessary to obtain Antitrust Clearance," Altria would offer to divest its e-vapor assets, and if those assets were not otherwise transferred to a third party, Altria would contribute such assets to JLI, upon receipt of antitrust clearance, for a price in the millions to be determined. (PX1269 (JLI) at 006; *see also* Pritzker (JLI) Tr. 868).

886. The October 15 Term Sheet provided that Altria would "elect the time (not to exceed two years from closing of the Purchase) when the parties initiate the HSR clearance process." (PX2147 (JLI) at 023). Altria added this term to make sure that it could divest or contribute its e-vapor portfolio, if requested by the FTC to obtain antitrust clearance, without potentially impacting a preexisting agreement with PMI. (*See* F. 887-890).

887. During the course of the negotiations, Altria became concerned that an existing agreement Altria had with PMI might complicate Altria's potential investment in JLI. Specifically, the issue was whether Altria's agreement with PMI – the E-Vapor Joint Research, Development and Technology Sharing Agreement ("JRDTA") – restricted Altria's ability to divest or contribute its e-vapor products to a third party during the term of the agreement. (Garnick (Altria) Tr. 1587-88; PX7036 (Garnick (Altria) Dep. at 156-57); *see* RX0873 (Altria) at 001).

888. Under the JRDTA, Altria had granted PMI a series of licenses to Altria's e-vapor products. (RX0873 (Altria) at 018-19). Altria was concerned that the JRDTA potentially constrained its ability to transfer ownership of those products during the term of the JRDTA. (PX7036 (Garnick (Altria) Dep. at 156-57)).

889. The JRDTA was set to expire on July 15, 2020, unless the parties negotiated an extension. (RX0873 (Altria) at 001 (establishing Effective Date of July 15, 2015), 027

(indicating that the R&D agreement would continue until the fifth anniversary of the Effective Date, unless extended)).

890. By providing in the October 15 Term Sheet that Altria could elect the time to initiate the HSR clearance process, not to exceed two years, Altria could delay the HSR filing date until after the July 15, 2020 date on which the JRDTA was set to expire. (Garnick (Altria) Tr. 1591-92; PX7036 (Garnick (Altria) Dep. at 156-57) (explaining that the two-year HSR filing deadline "was to give [Altria] some room to file HSR so that when we did it, and we got HSR approval, we could go ahead and contribute our product or divest it, if necessary, if possible, to a third party")).

891. The October 15 Term Sheet included a non-compete provision, which, consistent with the August 19 Term Sheet, contained a carve-out exempting "MarkTen and MarkTen Elite prior to their contribution or divestiture as described above" in the term sheet. (PX1269 (Altria) at 008).

892. In the October 15 Term Sheet, Altria revised the non-compete provision from the Support Obligations section of the August 19 Term Sheet by removing JLI's proposals that the non-compete apply "anywhere in the world" or to "current and future affiliates" (rather than to subsidiaries). (PX1269 (Altria) at 008; PX1432 (Altria) at 024). Altria also revised the non-compete to propose that it "terminate upon the termination of the" time period in which Altria is providing support services to JLI. (PX1269 (Altria) at 008-09).

893. With respect to the time for commencement of support services to be provided by Altria to JLI, the Support Obligations section of the October 15 Term Sheet added the language underlined below:

> - Services provided upon earlier of (i) contribution described above or (ii) Richard otherwise exiting the marketing and sale of products in the Field ("Contribution Date"). Richard agrees, effective from the Contribution Date and thereafter during the Services Term to provide the following services in the U.S. (the "Contribution Date Services," and together with the Purchase Date Services, the "Services"):
>
>   - assist with direct marketing programs, including inserts and/or onserts;
>
>   - fully support Jack's efforts to gain distribution, display and in-store support for Jack's products, including support point of sale prominence for Jack's products alongside Richard's; and
>
>   - grant Jack access to Richard's best in class infrastructure (including distribution) to maximize the growth of Jack.

(PX2147 (JIL) at 024). Regarding the underlined language above, Altria's in-house counsel Garnick explained, it was Altria's understanding that there were certain services that Altria could not, in compliance with antitrust law, provide to JLI if Altria was a

competitor of JLI's and that outside counsel added the underlined language "to ensure that [Altria was] protected and in compliance with the antitrust laws before . . . [it] provide[d] those enhanced services that [Altria] could not provide as long as [it was] a [competitor]." (PX7036 (Garnick (Altria) Dep. at 193-94)).

894. On Saturday October 20, 2018, JLI's Valani and Altria Board member Devitre had a meeting in New York, and Valani indicated that JLI was "ready to do a deal." (PX1313 (Altria) (email from Willard to Crosthwaite, Gifford, and Garnick). As Valani explained:

> [M]y recollection is that he gave me the impression that [JLI was] 90 percent there to do a deal. There were still outstanding matters. And we had experience that the [JLI] people could change their mind at any time . . . . That's the impression I got, that this time he was quite serious about moving ahead with the deal, but I still felt that we hadn't agreed on all terms.

(PX7001 (Devitre (Altria) IHT at 127-28)).

c. JLI's Response to Altria's October 25, 2018 Letter to the FDA

895. On the morning of October 25, 2018, Altria sent the FDA a letter responding to the FDA's September 12 Letter (F. 275), which Altria made public the same day ("October 25 Letter to the FDA"). Altria's letter announced that it would withdraw its pod products from the market and discontinue all non-traditional flavored cig-a-likes. (PX1071 (Altria) at 002-003; Willard (Altria) Tr. 1238, 1451-53)).

896. After Altria's October 25 Letter to the FDA was released publicly, Willard forwarded the letter to JLI's Pritzker, Valani, and Burns. (PX2022 (JLI) at 001; Willard (Altria) Tr. 1237-39; Pritzker (JLI) Tr. 872-73; *see also* RX0216 (Altria)).

897. Altria had not discussed with JLI its decision to withdraw pod products and non-traditional flavored cig-a-like products before sending its October 25 Letter to the FDA. (Garnick (Altria) Tr. 1763-64).

898. JLI first learned about Altria's October 25 Letter to the FDA after the letter became public. (Valani (JLI) Tr. 954).

899. JLI had no advance notice of Altria's response to the September 12 FDA Letter, or that Altria was going to discontinue products as announced in its October 25 Letter to the FDA. (Pritzker (JLI) Tr. 873-74; Valani (JLI) Tr. 956; *see also* PX7021 (Pritzker (JLI) Dep. at 216-17); PX7032 (Valani (JLI) Dep. at 149-50); PX7025 (Burns (JLI) Dep. at 215-16); PX7035 (Masoudi (JLI) Dep. at 126-27)).

900. Altria anticipated that JLI would be unhappy with Altria's October 25 Letter to the FDA, particularly because the letter said that Altria "believed that pod products substantially contributed to the youth epidemic." (Garnick (Altria) Tr. 1765; *see also* Gifford (Altria)

Tr. 2830 (confirming his belief that Altria's discontinuing Elite and flavored cig-a-like products would not increase chances of completing a deal with JLI)).

901. A retailer sent an email to JLI on October 25, 2018 relating to Altria's announcement of the withdrawal of Elite: "This just pisses me off. Continuously fail to compete in the category, so wa[ve] the white flag and try to bring others down with you." (PX2473 (JLI) at 001). Robbins, Chief Sales Officer for JLI, forwarded the retailer email internally, stating: "This seems to be the universal feeling out there. The Altria letter is a thinly veiled attempt to get rid of competition that threatens their cig franchise. Glad the retailers see it for what it is." (PX2473 (JLI) at 001).

902. JLI was surprised to learn of Altria's decision stated in its October 25 Letter to the FDA and viewed the letter as a "hostile action towards JUUL." (PX7011 Valani (JLI) IHT at 125; *see also* PX7011 (Valani (JLI) IHT at 124) (Valani was "shocked"); Valani (JLI) Tr. 944-45 (characterizing Altria's letter to FDA as "surprising"); PX7021 (Pritzker (JLI) Dep. at 150) (Pritzker "was amazed")).

903. Altria's decision to withdraw its pod products was not expected or welcomed by JLI. As Pritzker explained:

> I was and JUUL was perfectly happy to have those products stay on the market until an FTC decision. We were expecting it. We thought it was appropriate for the FTC to – to determine what should become of them and expected that it would be divestiture. We thought it was an FTC matter and not something for – for a premature action. So it was not welcomed. I thought it would complicate things.

(Pritzker (JLI) Tr. 874-75).

904. JLI was "surprised that [Altria] had taken the[] [products] off unilaterally." As Prtizker explained:

> [Altria] never seemed to mind divesting those products as part of – of what I thought to be agreed-upon strategy in which they would stay on the market, there would be a regulatory process, and I ultimately expected that [Altria] would not take them off the market. They'd be expected to divest them so that they remained in the market.·

(PX7021 (Pritzker (JLI) Dep. at 150)).

905. On October 25, 2018, after JLI had received Altria's October 25 Letter to the FDA, Altria's Willard and Gifford spoke to JLI's Pritzker, Valani, and Burns by telephone. During that telephone call, Willard said Altria was still interested in making a deal with JLI. (Pritzker (JLI) Tr. 728-30; Valani (JLI) Tr. 945).

906. Pritzker was "very skeptical," after Altria's October 25 Letter to the FDA, that a deal with Altria would be completed. One reason cited by Pritzker was Altria's "unilaterally taking products off the market," which Pritzker though was "complicating." Pritzker thought that Altria's action in that regard "seemed inconsistent with our conversations that [Altria] would continue to operate those [assets] until they sold them or were required to sell them, and I never wanted a unilateral withdrawal of the products." In addition, based on Altria's comments in the October 25 Letter regarding the negative impact on youth [of the] use of e-cigarettes, Pritzker was skeptical that Altria was "sincere in wanting to invest in" JLI. (PX7021 (Pritzker (JLI) Dep. at 154-55)).

d. October 28 and 30, 2018 Term Sheets

907. Garnick summarized in an email sent after JLI learned of the October 25 Letter to the FDA, "[t]he Tree folks are still talking to us even in light of the announcement we made today." (PX4350 (Altria) at 001). Altria was unsure that JLI would be willing to continue negotiating with Altria after the October 25 Letter. (Garnick (Altria) Tr. 1766-77 ("I was not sure that we would still be talking by the end of the day because of our letter and our announcement that we were removing pods. We thought that the folks at JLI might be upset by some of the statements we made in the letter and it might have ended the deal.")).

908. After Altria's October 25 Letter to the FDA, JLI was willing to continue negotiating with Altria. On October 28, 2018, Altria attorneys met with JLI attorneys. JLI's outside counsel circulated a revised term sheet ("October 28 Term Sheet"). (PX4350 (Altria); Pritzker (JLI) Tr. 875-77; PX4264 (Altria); PX2503 (JLI) at 001).

909. The Antitrust Clearance Matters section of the October 28 Term Sheet continued the proposal from prior term sheets that the parties "would be required to use reasonable best efforts to seek Antitrust Clearance" and to "agree to the reasonable concessionary requirements of the FTC in connection with changes in [Altria's] e-vapor business." (PX2503 (JLI) at 007-008). It also maintained the proposal that Altria offer to divest its e-vapor assets "if necessary to obtain Antitrust Clearance," and if those assets were not otherwise transferred to a third party, to contribute such assets to JLI upon receipt of antitrust clearance. (PX2503 (JLI) at 007). The October 28 Term Sheet added that such contribution would be "at [JLI's] election," but otherwise this provision was not materially revised from the most recent October 15 Term Sheet. (PX2503 (JLI) at 007).

910. In the October 28 Term Sheet, JLI largely accepted Altria's proposal to delay filing for HSR, as provided in the October 15 Term Sheet, but changed the filing deadline to be a date certain of July 15, 2020, rather than an undefined date within two years of closing (*see* F. 886). JLI's revision stated that "[Altria] shall elect the time (no later than July 15, 2020) when the parties initiate the HSR clearance process." (PX2503 (JLI) at 007).

911. The non-compete provision in the Support Obligations section of the October 28 Term Sheet maintained from prior term sheets the explicit carve-out for "MarkTen and

MarkTen Elite prior to their contribution or divestiture as described above." (PX2503 (JLI) at 010).

912. JLI added the following underlined text to the non-compete provision in the Support Obligations section of the October 28 Term Sheet: "[Altria] agrees to refrain, and to cause its current and future subsidiaries and controlled affiliates to refrain, from competing (or preparing to compete, including through research and development activities) in the e-vapor business, other than (i) with respect to MarkTen and MarkTen Elite prior to their contribution or divestiture as described above and (ii) basic research not directed toward the e-vapor business and not undertaken with the intent (primarily or in part) of developing or commercializing technology or products in the e-vapor business. . . . Consequences of competition by an upstream [Altria] affiliate dealt with in "Richard Exit Right" below." How the non-compete provision would apply to certain research and development activities and whether it would bind Altria's controlled or upstream affiliates remained to be negotiated. (PX2503 (JLI) at 010).

913. On October 29, 2018, JLI and Altria negotiators met in New York, New York, for a previously scheduled meeting. (Pritzker (JLI) Tr. 875; PX2322 (JLI) at 001). The negotiators met at the office of Altria's outside legal counsel. The attendees included Willard, Gifford, Garnick, and Crosthwaite from Altria, and Pritzker, Burns, and Valani from JLI. (Valani (JLI) Tr. 945-46).

914. The October 29, 2018 meeting in New York among Altria and JLI negotiators "was a long meeting" and "covered a lot of points." Pritzker was "surprise[d]" that the meeting "ended with [him] feeling that actually there was a road to actually getting something done." The discussions were "sufficiently promising" that Altria and JLI decided to "allow attorneys to start putting together the full documentation and [to] negotiate the remaining open issues and the fine details of the agreement." (Pritzker (JLI) Tr. 876-77).

915. The evening of October 29, 2018 was the first time in negotiations between JLI and Altria that "there was alignment" on the terms of a term sheet. (Valani (JLI) Tr. 948-49; *see also* PX4167 (Altria) at 008 (Willard texting Devitre, "We have reached agreement on terms.")).

916. On October 30, 2018, JLI's outside legal counsel sent Altria what the transmittal email referred to as the "final term sheet" ("October 30 Final Term Sheet"). (PX1271 (Altria) at 001). The October 30 Final Term Sheet was expressly non-binding. (RX0285 (Altria) at 004 n.1 ("This term sheet is not binding on any party.")).

917. The October 30 Final Term Sheet maintained the same structure for treatment of Altria's existing e-vapor products as the October 28 Term Sheet, which was that Altria would either contribute or divest its existing products as part of the HSR clearance process. The non-compete provision remained unchanged from the October 28 Term Sheet, including its exemption for "MarkTen and MarkTen Elite prior to their contribution or divestiture . . . ." (RX0285 (Altria) at 021-22, 024).

918. The October 30 Final Term Sheet left unchanged JLI's proposal that Altria could delay HSR filing until July 2020. (RX0285 (Altria) at 022 ("[Altria] shall elect the time (no later than July 15, 2020) when the parties initiate the HSR clearance process.")). This proposal was acceptable to both Altria and JLI. (Garnick (Altria) Tr. 1671, 1677-78).

919. Allowing Altria to delay HSR filing until July 2020 "avoid[ed]" any potential issue with the PMI agreement and allowed Altria to divest or contribute its existing products. (Garnick (Altria) Tr. 1671). Such delay in seeking antitrust clearance also "push[ed] back the date when [Altria] would be on [JLI's] board," which, in Garnick's view, "was fine with JLI . . . ." (Garnick (Altria) Tr. 1678).

920. The October 28 Term Sheet and the October 30 Final Term Sheet, as did the October 15 Term Sheet, in the Altria Support Obligations section, distinguished between two types of services that Altria could provide to JLI after the closing of the transaction. (F. 921-922; PX1269 (JLI) at 007-09 (October15, 2018 Term Sheet); PX2503 (JLI) at 008-10 (October 28, 2018 term sheet); RX0285 (Altria) at 022-24 (October 30, 2018 Final Term Sheet)).

921. Some services that were anticipated to be provided by Altria to JLI could be provided immediately upon closing the transaction, including Altria's supporting, consulting, and assisting JLI in obtaining PMTA approval for JLI's products. (PX1269 (Altria) at 007); *see also* PX2503 (JLI) at 008-09; RX0285 (Altria) at 022-23).

922. Other services anticipated to be provided after closing the transaction – referred to as enhanced services ("Enhanced Services") – could not be provided so long as Altria and JLI remained competitors in the e-vapor category because of antitrust considerations. (PX7036 (Garnick (Altria) Dep. at 193-94); PX1269 (Altria) at 008). Enhanced services included assisting with JLI's marketing; assisting with JLI's "efforts to gain distribution, display and in-store support"; and providing JLI with access to Altria's "best in class infrastructure (including distribution)." (PX1269 (Altria) at 008; *see also* PX2503 (JLI) at 009; RX0285 (Altria) at 023).

923. The October 15 Term Sheet had proposed that Altria would not provide Enhanced Services until the "earlier of (i) contribution . . . or (ii) [Altria] otherwise exiting the marketing and sale of products in the Field." (PX1269 (Altria) at 008). The October 28 and October 30 Term Sheets contained similar language but replaced "contribution" with "Antitrust Clearance." (PX2503 (JLI) at 009; RX0285 (Altria) at 023).

924. JLI did not see a delay in JLI's receiving Enhanced Services as a problem. While these services were valuable to JLI, they were "not the critical service[s]" to be provided by Altria. As Pritzker explained, it was "important . . . for real and cosmetic reasons to know that [Altria was] prepared to offer" the Enhanced Services, "but when they started would not have been consequential to [him]." (Pritzker (JLI) Tr. 871-72).

925. For JLI, Altria's provision of regulatory support services to JLI, including assistance with PMTA approval, which is "existential" for JLI, was "invaluable." (Pritzker (JLI) Tr. 820;

see also PX7025 (Burns (JLI) Dep. at 212) (explaining that support services were "incredibly important," to JLI, "especially things like support around PMTA submission and FDA support")).

926. Regarding the issue of provision of services to JLI, Willard's recollection was that JLI wanted Altria's services, but both sides understood that "there were certain reasons why they could be provided at various times, and . . . both sides were fairly flexible on that." Willard did not "recall that the timing of those services was an important part of what [JLI was] expecting." (Willard (Altria) Tr. 1212-13).

7. November 2018 until Execution of Final Documents

927. On November 13, 2018, JLI announced that it would discontinue sales of all non-traditional flavors at retail stores, leaving those flavors to be sold only online, and that JLI would be implementing additional age-verification measures. (RX1926 (JLI) at 001-03). The announcement indicates that JLI's decision was a response to the FDA, stating that JLI and the FDA share the "common goal" of "preventing youth from initiating on nicotine" and "paraphrase[d] FDA Commissioner Gottlieb" in stating JLI wanted to be an "off-ramp" for adult smokers, "not an on-ramp" for youth initiation. (RX1926 (JLI) at 001).

928. Altria did not know in advance how JLI had planned to respond to the September 12 FDA Letter that JLI received or that JLI would discontinue sales of all non-traditional flavors at retail, as JLI announced on November 13, 2018. (Garnick (Altria) Tr. 1764).

929. Besides Altria, JLI was the only e-vapor manufacturer to remove flavored products before the FDA imposed a flavor ban, which went into effect in February 2020. (Garnick (Altria) Tr. 1775).

930. In November 2018, Altria began due diligence for the contemplated transaction. (Garnick (Altria) Tr. 1776).

931. In November 2018, a deal between Altria and JLI was not a sure thing. Performing due diligence is "always . . . a very, very important step in any transaction." (PX7024 (Crosthwaite (Altria/JLI) Dep. at 284)). Altria "had no idea" what due diligence might uncover and the parties "still had the actual [deal] documents to negotiate . . . ." (Garnick (Altria) Tr. 1776). "Until [Altria] had completed diligence, nothing was certain." (PX7024 (Crosthwaite (Altria/JLI) Dep. at 284)).

932. Due diligence took "at least a month" and involved "large volumes of people" undertaking an "exhaustive" review of the "financial, legal, technological, [and] strategic matters of the business[.]" (Valani (JLI) Tr. 954-55).

933. From the beginning of November 2018 until the closing of the Transaction on December 20, 2018, Altria and JLI exchanged draft transaction documents. (Pritzker (JLI) Tr. 802).

934. On November 15, 2018, the parties exchanged the first draft of the transaction documents. (Garnick (Altria) Tr. 1780-81; *see, e.g.*, RX0838 (Altria) at 001, 035 (Draft Voting Agreement), 306 (Draft Purchase Agreement), 354 (Draft Relationship Agreement) (collectively, "November 15 Draft Transaction Documents"). These were drafts of the "actual transaction documents," as distinguished from the term sheets. (Garnick (Altria) Tr. 1781).

935. The November 15 Draft Transaction Documents included a non-compete provision in the Draft Relationship Agreement, with a carve-out for MarkTen and MarkTen Elite "as such business is presently conducted," pending antitrust review and clearance, in accordance with other provisions in the draft. (RX0838 (Altria) at 373). As of November 15, 2018, Altria was selling MarkTen cig-a-likes in tobacco, menthol, and mint flavors. The non-compete provision in the draft contemplated that Altria's then-existing products would remain on the market through the antitrust review process. (Garnick (Altria) Tr. 1781-83; Gifford (Altria) Tr. 2831).

936. The November 15 Draft Transaction Documents would require Altria to submit its HSR filing "[o]n or prior to July 15, 2020." (RX0838 (Altria) at 325 (Draft Purchase Agreement).

937. On December 7, 2018, Altria announced the "discontinuation of production and distribution of all *MarkTen* and *Green Smoke* e-vapor products and Verve oral nicotine containing products." (PX9080 at 001 (Altria press release) ("December 7 Announcement").

938. JLI did not have any prior notice of Altria's December 7 Announcement, nor had anyone at JLI requested that Altria take that action. (Pritzker (JLI) Tr. 884-85; Valani (JLI) Tr. 957; *see also* PX7021 (Pritzker (JLI) Dep. at 164, 169); PX7032 (Valani (JLI) Dep. at 151-52); PX7025 (Burns (JLI) Dep. at 217-18); PX7035 (Masoudi (JLI) Dep. at 89, 128-29)).

939. Neither Pritzker nor Valani could remember learning, prior to this litigation, that Altria had shut down Nu Mark and removed its remaining cig-a-like products in December 2018. (Pritzker (JLI) Tr. 877-78; Valani (JLI) Tr. 951-52, 957; PX7021 (Pritzker (JLI) Dep. at 163-64) ("[The announcement] was of no consequence because [he] didn't think that [the products] were particularly competitive to Juul[.]"); PX7011 (Valani (JLI) IHT at 134) (calling the decision "irrelevant" because MarkTen was a "terrible" product)). As O'Hara explained: "[I]t barely even registered" because Nu Mark was not "a competitive entity in the market. I did not track them closely. It was not meaningful at all when they did that to [JLI's] competitive stake, you know, in the market." (PX7033 (O'Hara (JLI) Dep. at 176)).

940. On December 8, 2018, Altria's Garnick wrote to his JLI counterpart that Willard believed the principals needed to discuss "10 or so outstanding issues . . . in order to close by Dec. 21." (RX1591 (JLI) at 001; *see also* Gifford (Altria) Tr. 2844-45 (listing key unresolved issues in December, including "the [capitalization] table, pre-emptive rights," and "right

up until the last minute," valuation); Gifford (Altria) Tr. 2765-66 (explaining that the capitalization table listed capital investors in JLI and the stock options they controlled, which is relevant to whether Altria's ownership interest in JLI could be diluted by "an IPO in the future or other stock sales")).

941. At a December 11, 2018 meeting of Altria's Board of Directors, Altria's leadership updated the Board on the status of the potential transaction with JLI, noting that Altria and JLI had agreed to non-binding terms on October 29; due diligence was underway; and that "[a]lthough progress has been made a potential deal with [JLI] is still highly uncertain and subject to many factors[.]" (RX0973 (Altria) at 017; *see also* RX0973 at 005 ("Significant negotiation continues on the deal documents[.]").

942. In early to mid-December 2018, JLI expressed concern that under the proposed transaction, JLI might be considered a controlled affiliate of Altria pursuant to Altria's JRDTA with PMI, which would require Altria to share all of JLI's intellectual property with PMI. On December 14, 2018, Garnick responded to JLI in an email to JLI's Masoudi that "the possibility of interpreting the PMI agreement in the way that you propose is not a notable risk. For that reason, we are not willing to give up voting or board rights" to address such a possibility. (PX7035 (Masoudi (JLI) Dep. at 98-102); PX2494 (JLI) at 001).

943. On December 15, 2018, Altria's Garnick wrote to JLI's Chief Legal Officer, Gerald Masoudi "to express a bit [of] dismay at some of the proposed terms" in the draft services agreement that Altria received from JLI, including "[a] provision that would have the effect of giving [JLI] a license, if not ownership, of the [Altria] IP it uses in providing the services" and "a provision that [Altria] pays [JLI's] taxes in certain instances[.]" Garnick hoped that "[g]iven the severe time restraints . . . each side would propose reasonable terms from the very beginning and not seek to overreach." (RX1592 (JLI) at 001).

944. On December 15, 2018, Garnick advised his colleagues that the "deal may not survive the day" because of a dispute with JLI over how to present the companies' posture toward cigarettes in a press release. For Willard, JLI's push to present a "smoke-free future" was a "walk away point." (RX0910 (Altria) at 001-02).

945. On December 15, 2018, Willard, in text messages with Devitre, described "two remaining big issues" related to the deal. First, JLI was trying to dilute Altria's position by half a billion dollars. Devitre responded that the point was a "critical" one on which Altria "should not give in." Second, JLI wanted to issue a single press release with Altria, "that demeans our cigarette business and sign us up for a smoke free future." Willard concluded, "[i]f they do not give on both the deal will not proceed." (PX4167 (Altria) at 010); Willard (Altria) Tr. 1462-63).

946. "[O]ne of the most important terms of the [Altria/JLI] deal was value[.]" (Willard (Altria) Tr. 1464).

947. On December 16, 2018, as a result of the share dilution issue referenced in F. 945, JLI and Altria hit what Willard described to Devitre as "an impasse" on valuation, an "eleventh-hour" issue that required additional negotiation between the parties. By December 20, 2018, Altria and JLI had gotten past the impasse and finally reached an agreement on all terms. (PX4167 (Altria) at 010 (text message from Willard to Devitre); RX1417 (JLI) at 001; Willard (Altria) Tr. 1464-65).

8. Transaction Documents and Amended Transaction Documents

948. On December 20, 2018, Altria and JLI executed final transaction documents, which included a "Purchase Agreement," a "Relationship Agreement," a "Services Agreement," and a "Voting Agreement." (PX2141 (JLI) (Purchase Agreement); PX1276 (JLI) (Relationship Agreement); PX1275 (JLI) (Services Agreement); PX2216 (JLI) (Voting Agreement) (collectively, "Transaction Documents").

949. Pursuant to the Transaction, Altria invested $12.8 billion dollars in JLI in exchange for a 35 percent economic interest, obtained the right to appoint one-third of JLI's directors, pending HSR approval, imposed some restrictions on JLI's sale rights, and imposed some restrictions preventing Altria from acquiring control of JLI. (RX1001 (Altria) at 001; PX2216 (JLI) at 004-05, 052; PX1276 (JLI) at 029-32, 041).

950. The Services Agreement requires Altria to provide JLI with regulatory assistance in connection with the preparation and filing of JLI's PMTAs, among other services. (PX1275 (JLI) at 028).

951. The Relationship Agreement includes a non-compete provision under which Altria agreed "not to, directly or indirectly[,] . . . own, manage, operate, control, engage in or assist others in engaging in, the e-Vapor Business" while the Services Agreement remained in effect. (PX1276 (JLI) at 025 § 3.1). The non-compete provision includes a carve-out provision permitting Altria to "engage in the business relating to . . . its Green Smoke, MarkTen [] and MarkTen Elite brands, . . . as such business is presently conducted," pending HSR approval. (PX1276 (JLI) at 026 § 3.1; Willard (Altria) Tr. 1194-95).

952. The non-compete provision in the Relationship Agreement is limited to Altria's activities in "the e-Vapor Business" and does not limit Altria's ability to market other inhalable alternatives such as IQOS and oral alternatives such as the On! product. (PX1276 (JLI) at 025 § 3.1; Willard (Altria) Tr. 1195; Gifford (Altria) Tr. 2709-10).

953. The non-compete provision in the Relationship Agreement provides for a six-year initial term, making it set to expire on December 20, 2024 unless extended by the parties. (PX1276 (JLI) at 025 § 3.1(a) (Relationship Agreement) (providing that the non-compete provision terminates at "the termination or expiration of the term (as set forth in the Services Agreement)"; PX1275 (JLI) at 005, 014 (Services Agreement) (defining the "Initial Discretionary Termination Date" for the Services Agreement as "the date that is the sixth (6^{th}) anniversary of the date hereof")).

954. The non-compete provision in the November 15 Draft Transaction Documents did not change between the Draft Relationship Agreement and the final Relationship Agreement executed on December 20, 2018. (Garnick (Altria) Tr. 1782-83).

955. Although Altria had withdrawn MarkTen and MarkTen Elite from the market, Altria has continued to own or hold the rights to the intellectual property for these products. (Garnick (Altria) Tr. 1783-84).

956. Because MarkTen and MarkTen Elite had been on the market as of August 8, 2016, the Deeming Rule would not necessarily prevent returning these same products to the market even though Altria had withdrawn the products previously. FDA regulations do not require the product to have been on the market continuously. (Murillo (Altria/JLI) Tr. 3022).

957. The Purchase Agreement provided that Altria would divest its e-vapor assets as needed to obtain HSR approval:

> The Investor [Altria], to the extent permitted . . . shall and, shall cause its Affiliates to . . . propose, negotiate, offer to commit and effect (and if such offer is accepted, commit to and effect) . . . the sale, divestiture, license, disposition or hold separate of such assets or businesses of the Investor or any of its Affiliates . . . in each case, as may be required in order to avoid the entry of any decree, judgment, injunction, or other order . . . that would restrain, prevent or delay the Antitrust Conversion . . . .

(PX2141 (JLI) at 036). "Antitrust Conversion" refers to the automatic conversion of Altria's initial non-voting shares to voting shares, in accordance with the antitrust clearance provisions of the Purchase Agreement. (PX2141 (JLI) at 009-11).

958. The final Purchase Agreement required both Altria and JLI to make their HSR filings within 90 days of the closing of the Transaction. (PX2141 (JLI) at 034 (Altria/JLI Purchase Agreement, Section 4.1(a))).

959. On January 28, 2020, Altria and JLI amended the Transaction Documents. (PX0010 (Altria) (Amended Purchase Agreement); PX0011 (Altria) (Amended Relationship Agreement); PX0012 (Altria) (Amended Services Agreement) (collectively, "Amended Transaction Documents")).

960. Pursuant to the Amended Services Agreement, Altria continues to provide JLI with regulatory affairs support for FDA filings but is not obligated to provide other services, including services related to distribution of JUUL, absent further agreement between the parties. (PX0012 (Altria) at 002 (terminating all distribution and other services except for services described in sections II(F), which would continue only through March 31, 2020, and IV(A) of the Services Agreement's "Initial Services"); PX1275 (JLI) at 028-29 (Services Agreement) (defining II(F) "Initial Services" to include regulatory services and

IV(A) to include shelf-space placement); *see also* PX7040 (Gifford (Altria) Dep. at 32) (confirming that following the amendments, "the gist of" the remaining services "was to support [JLI's] PMTA filing and their MRTP [(modified risk tobacco product)]")).

961. The Amended Relationship Agreement added two clauses providing for the termination of the non-compete provision. Altria may "permanently terminate" the non-compete provision: (1) if JLI were "prohibited as a matter of federal law" from selling e-vapor products in the United States for at least 12 months, unless a PMTA had been pending for at least six months; or (2) if the "aggregate value" of Altria's shares in JLI were written down to $1.28 billion or less. (PX0011 (Altria) at 002-03).

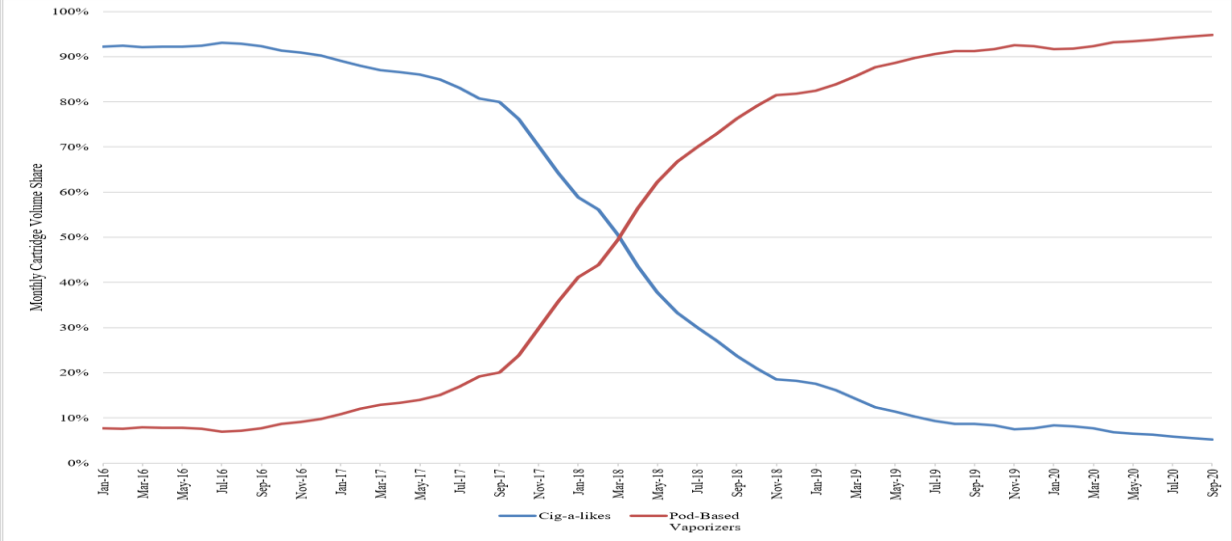
962. As of September 30, 2020, Altria valued its JLI investment at $1.6 billion. (RX2042 (Altria) at 003).

M. Market Conditions Around the Time of the Transaction

1. Decline of Cig-a-likes

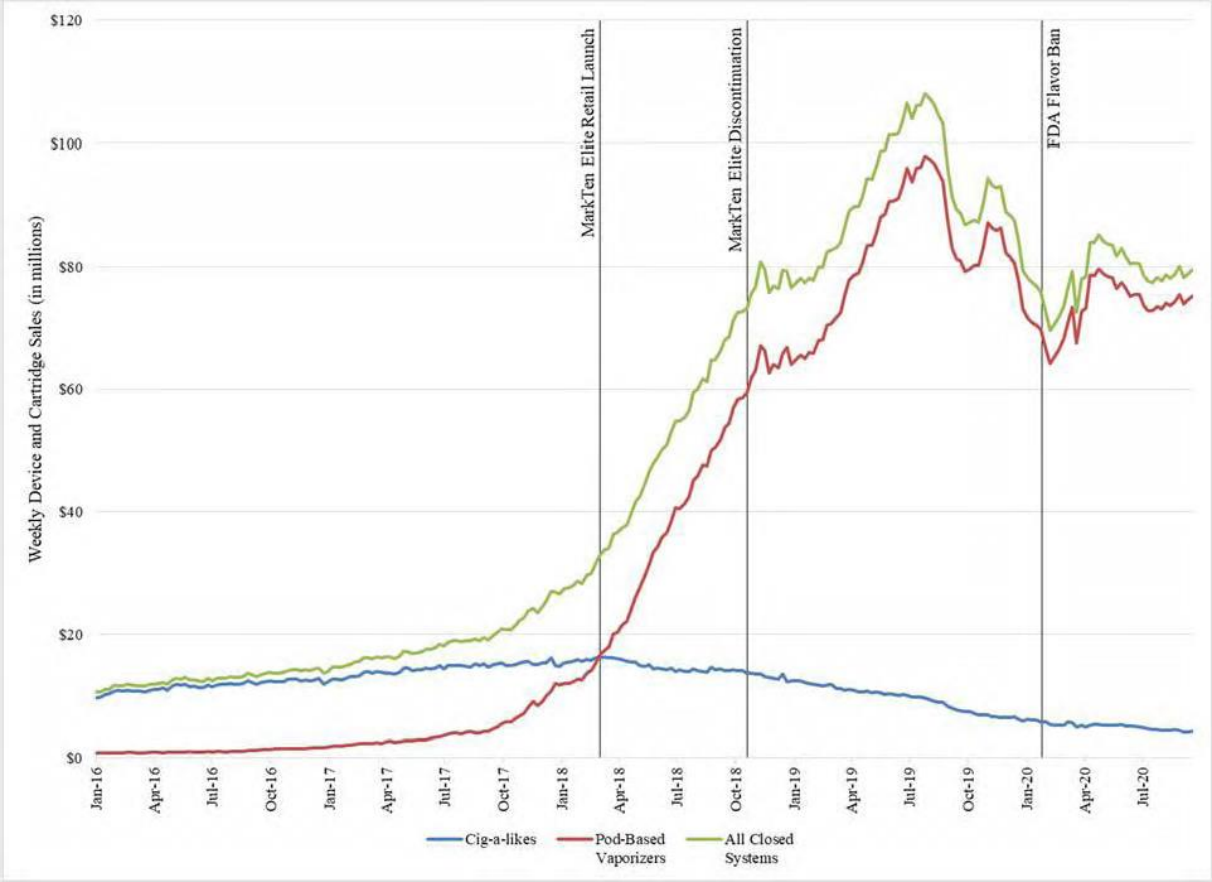
963. According to IRI Projected Data (F. 174) of sales of e-cigarette cartridges by volume reviewed and analyzed by Respondents' proffered expert witness, Dr. Murphy, the share of cig-a-likes in 2016 was more than 90 percent of the market; the share of cig-a-likes in January 2018 was about 59 percent; the share of cig-a-likes in December 2018 was less than 19 percent; and the share of cig-a-likes in September 2020, was 5 percent, with pod-based products capturing the other 95 percent. (RX1217 (Murphy Expert Report at 028, 030, 047, 062 ¶¶ 41, 62 n.143, 80, Fig. IV.3)).

964. The shift from cig-a-likes to pod-based products (F. 963) is depicted in the following chart showing relative volume shares for cartridges of cig-a-likes and pod-based products, based on IRI Projected Data analyzed by Dr. Murphy:



(RX1217 (Murphy Expert Report at 028, 030 ¶ 41, Fig. IV.3) (cartridges)).

965. Since March 2018, monthly sales of pod-based e-cigarettes have consistently and increasingly outpaced sales of cig-a-likes. Since March 2018, growth in closed system e-cigarette product sales has come entirely from pod-based products. Sales of e-cigarette devices and cartridges by type are depicted in the following chart based on IRI Projected Data analyzed by Dr. Murphy:



(RX1217 (Murphy Expert Report at 022-23 ¶ 32, Fig. IV.1)).

966. During the 12 months leading up to Altria's discontinuation of all e-cigarette products in December 2018, based on Dr. Murphy's analysis of IRI Projected Data for devices and cartridges, weekly sales of cig-a-likes were essentially flat, while weekly sales of pods grew by 619 percent. (RX1217 (Murphy Expert Report at 077-78 ¶ 105, Fig. VI.1)).

967. MarkTen cig-a-likes "were not viable . . . . They didn't have nicotine salts, they didn't satisfy nicotine cravings, and they were cigalikes." (O'Hara (JLI) Tr. 630). As explained by Joseph O'Hara, JLI's Director of Regulatory Strategy, the MarkTen cig-a-likes "were shaped like a cigarette, which isn't ideal for people that are trying to switch from cigarettes"; the nicotine formula for MarkTen Bold was low quality; and the nicotine formula for the other MarkTen cig-a-likes was not salt-based. (O'Hara (JLI) Tr. 624-25).

968. O'Hara believed that the MarkTen cig-a-likes were "extremely low quality" and, after a few months of tracking sales data, thought it "was pretty clear" that the MarkTen cig-a-likes were "a product failure." (O'Hara (JLI) Tr. 583-84). Bob Robbins, JLI's Chief Growth Officer, viewed the MarkTen cig-a-likes similarly to O'Hara: "They didn't sell well. They didn't appear to have attachment with adult smokers. They didn't really drive down cigarette use, and it didn't seem like the trade channel retailers or wholesalers had good feedback on them." (Robbins (JLI) Tr. 3245).

969. PMI concluded that the MarkTen cig-a-likes were not successful at converting smokers. (King (PMI) Tr. 2431, 2533). PMI had commercialized the MarkTen cig-a-like in a test market outside the United States under the brand name Solaris, but discontinued it based on low market share. (King (PMI) Tr. 2532).

970. NJOY has discontinued two of its cig-a-like products: NJOY Loop and NJOY King. NJOY Loop was a cig-a-like product that consisted of two cig-a-likes inside a charging case. NJOY launched the Loop in September 2018, but discontinued the product at most retailers in April 2019, because, from a business perspective, it did not make sense to continue to manufacture and sell that product. (Farrell (NJOY) Tr. 287-88, 352-53). NJOY King was a disposable cig-a-like product launched in approximately 2013. (Gardner (Altria) Tr. 2598; Farrell (NJOY) Tr. 290, 355-56). King contained high nicotine levels and no salts, which made the product experience "intensely harsh." (Gardner (Altria) Tr. 2598). It was so harsh that "[a]dult smokers could not use th[e] product on a routine basis" and it thus could not "deliver nicotine satisfaction." (Gardner (Altria) Tr. 2598, 2600). NJOY pulled the product from the market in 2019 for business reasons. (Farrell (NJOY) Tr. 354, 357-58).

971. NJOY continues to market a cig-a-like product called the Daily. In 2021, the Daily's sales volume was [redacted] of that for NJOY's Ace pod product. (Farrell (NJOY) Tr. 300-01, *in camera*).

972. Reynolds continues to market cig-a-like products called Vuse Ciro, Vuse Solo, and Vuse Vibe. (Huckabee (Reynolds) Tr. 377-78). Between 2018 and 2019, the shipments for Reynolds' Vuse Solo cig-a-like fell by almost [redacted] percent. Between 2019 and 2020, the shipments for Reynolds' Vuse Solo cig-a-like fell by an additional [redacted] percent. (Huckabee (Reynolds) Tr. 432, *in camera*; *see also* PX7037 (Huckabee (Reynolds) Dep. at 26) (explaining that over the last two years the cig-a-like form factor products in Reynolds' portfolio have declined because pods are now substantially more popular)).

973. As summarized by K.C. Crosthwaite, the current CEO of JLI, cig-a-likes "are essentially irrelevant in the market today." (PX7024 (Crosthwaite (Altria/JLI) Dep. at 213-14); *see also* Crozier (Sheetz) Tr. 1560 (agreeing that the e-vapor category "is now overwhelmingly pods")).

2. Impact of Withdrawal of Altria's Products on JLI's Prices

a. Cig-a-likes

974. Based on Dr. Murphy's analysis of IRI Projected Data, 90 percent of Altria's sales of e-cigarettes were cig-a-likes in 2018. (RX1217 (Murphy Expert Report at 008-09 ¶ 12); Murphy Tr. 3106-07). Complaint Counsel's expert witness, Dr. Rothman, determined that Altria had a 10 percent share of the closed system market in the 12 months leading to October 2018 (F. 177) and agrees that Altria's Elite never had more than one percent of the share of closed system market. (PX7048 (Rothman Trial Dep. at 174)). One hundred percent of JLI's sales of e-cigarettes are of its JUUL pod-based product. (PX2534 (Danaher (JLI) Decl. at 003 ¶ 8)).

975. Dr. Murphy's analysis of sales volumes from August 2017 to August 2020, comparing all cig-a-likes, Altria cig-a-likes (Mark Ten and Green Smoke cig-a-like products) and non-Altria cig-a-likes, shows that as Altria's sales declined following the discontinuation of its cig-a-like products, sales of rival cig-a-like products increased by a nearly equal magnitude. This shows that sales lost by Altria's cig-a-likes diverted to other cig-a-likes, not to pod-based products, and that Altria's cig-a-likes did not constrain JLI's pricing. (RX1217 (Murphy Expert Report at 068-69, 082, 083 ¶¶ 88, 113, 115, Fig. VI.3); Murphy Tr. 3118).

976. Altria's cig-a-like products were not a significant constraint on JLI's pods because the cig-a-like category was declining and cig-a-likes were not close substitutes for pods at the time of the Transaction. (Murphy Tr. 3124-25).

977. JLI did not "ever change its pricing" or "its promotions" in response to the MarkTen cig-a-like products. (Robbins (JLI) Tr. 3245, 3248).

978. JLI did not change its pricing or promotions in response to the withdrawal of MarkTen cig-a-like products in December 2018. (Robbins (JLI) Tr. 3249; PX7025 (Burns (JLI) Dep. at 232-33)).

b. Pods

979. A McKinsey pricing study of e-cigarette competitors prepared for JLI in May 2018 compared the prices and price elasticity of JUUL products with the prices and price elasticity of other e-vapor competitors' products, including MarkTen. (PX2252 (JLI) at 012, 048-49).

980. JLI tracked pricing and promotions by Altria. As one example, in June 2018, JLI's Bob Robbins widely shared with others internally at JLI, pricing and retail margin information about MarkTen Elite, which he had obtained from Altria at a trade show. (PX2477 (JLI) at 001 ("M10 Elite is running a 'buy a pack of pods for $8.99, get the device kit ($19.99 msrp [manufacturer's suggested retail price]) for free.' Plus, they are including an

escalating retail clerk incentive of $100-$500 based on number of battery kits sold, which is a significant amount of $$ for a retail clerk. The trade flyer has retail margin expectations of 34% on pod packs and 28% on devices.")).

981. In March 2018, JLI launched a device promotion by dropping JUUL's starter kit price by $20. (PX2062 (JLI) at 016; PX2599 (JLI) at 014-15).

982. JLI's promotions were generally planned six months to a year in advance, meaning that a spring 2018 promotion would have been planned by the fall of 2017 at the latest, well before the launch of Altria's MarkTen Elite. (Robbins (JLI) Tr. 3255-56).

983. At Sheetz, after the launch of Elite in February 2018, JLI did not respond with new promotions, but ran its "normal" promotion, which was its "standard" $20 off the combined purchase of a battery and pods. The $20 off promotion was something that JLI had done at Sheetz before Elite was introduced and Crozier did not perceive JLI as "being concerned" about the introduction of Elite. (PX7019 (Crozier (Sheetz) Dep. at 76-77)).

984. Over the eight months that Elite was on the market in 2018, Elite never achieved more than a one percent share of cartridge unit sales among closed systems on the market. (RX1217 (Murphy Expert Report at 008-09 ¶ 12); PX7048 (Rothman Trial Dep. at 46-47)).[44] A product with a market share of less than one percent is unlikely to be an important constraint. (Murphy Tr. 3124).

985. Complaint Counsel's expert witness, Dr. Rothman, did not analyze whether JLI changed its prices in response to the introduction or the removal of Elite. (PX7048 (Rothman Trial Dep. at 171-72)).

3. Competition from Pod-based Products

986. In the second half of 2018, NJOY and Reynolds both commercialized pod-based products (NJOY's Ace and Reynolds' Vuse Alto) that, unlike Elite, contained nicotine salts. (RX1456 (JLI) at 001-02; O'Hara (JLI) Tr. 633-34; *see also* Farrell (NJOY) Tr. 336).

a. NJOY's Ace

987. By November 2018, NJOY launched Ace, a pod-based product that had been on the market under different ownership prior to August 8, 2016. (Farrell (NJOY) Tr. 336).

[44] Apex had minimal distribution and was removed a month after it launched. (PX0018 at 008). According to Altria's sales data, analyzed by Dr. Murphy, Altria sold only 460 Apex device units. (RX1217 (Murphy Expert Report ¶ 34 n.56)).

988. NJOY considers Ace a "best in class" product capable of converting "a large percentage of the individuals who try" it. (Farrell (NJOY) Tr. 301-02). It comes in 2.4 and 5 percent nicotine strengths, both with salts. (Farrell (NJOY) Tr. 229-30, 297-98, 341 (discussing PX3216 (NJOY) at 003); *see also* Farrell (NJOY) Tr. 362 (confirming all NJOY products currently on the market contain nicotine salts)). The pod and the device, which are sold separately, connect together magnetically. (Farrell (NJOY) Tr. 214-15).

989. In December 2018 or January 2019, NJOY introduced a 99-cent price promotion on the Ace device (which has a Manufacturer's Suggested Retail Price ("MSRP") of $24.99) to incentivize product trial. (Farrell (NJOY) Tr. 304, 306-09; RX1711 (Reynolds) at 003, 020 (listing MSRP); *see also* Farrell (NJOY) Tr. 309 (stating that NJOY is not running these promotions because of the FTC investigation)). During the same time period, a JUUL device retailed for approximately $34.99. (RX1217 (Murphy Expert Report at 071 ¶ 91, Fig. V.11) (showing JUUL device price in January 2019 as approximately $35); RX1605 (JLI) at 001 (listing the MSRP of a JUUL device as $34.99)).

990. [redacted] (Crozier (Sheetz) Tr. 1516-17, *in camera*). Six months into the promotion, in June 2019, JLI's analysis showed that NJOY Ace was capturing 66 percent of device market share at Circle K, almost three-quarters of which came "at JUUL's expense." (PX2602 (JLI) at 019).

991. By September of 2019, NJOY had captured a 22.7 percent share of total volume of devices sold and 13.7 percent share of dollars in the e-cigarette market. (RX1061 (PMI) at 010).

992. IRI Projected Data shows that sales of NJOY's Ace devices increased from the time of its launch in 2018 to the peak of its promotion in September 2019, from roughly 2,500 devices per week to more than 200,000 devices per week. (RX1217 (Murphy Expert Report at 053-54 ¶ 70)).

993. [redacted] (Crozier (Sheetz) Tr. 1517-18, *in camera*; *see also* PX7033 (O'Hara (JLI) Dep. at 199) (explaining that NJOY has "seen their pod sales . . . increase as a result of their increased device sales")).

994. IRI Projected Data shows that sales of cartridges for NJOY's Ace devices increased from about 1,600 units in weekly cartridge volume in 2018 to about 1.16 million units in weekly cartridge volume starting in August 2019. (RX1217 (Murphy Expert Report at 053-54, 056 ¶ 70, Figure V.6)).

995. By the summer of 2019, "NJOY [was] cannibalizing [JUUL's] growth [and] threatening to take [its] established userbase[.]" (RX1537 (JLI) at 008).

996. As JLI's internal analysis explained in July 2019, NJOY Ace users did not see JUUL as offering "meaningful advantages to justify its cost," so "it [was] common and easy for users to try something else." (RX1550 (JLI) at 006).

997. In an August 2019 email, Jared Fix, JLI's Chief Strategy Officer, observed that, due to NJOY's discounting, JLI was "facing an aggressive competitive threat for the first time." (RX1547 (JLI) at 002). Kevin Cooke, JLI's Senior Vice President of U.S. Commercial, responded stating: NJOY's promotion was the "biggest disruptor to the growth of [JLI's] business." In "[a]ccounts that have NJOY, our business on avg is up about 1% in the last 3 months . . . . Accounts that don't have NJOY my biz is up 21% on average[.]" (RX1547 (JLI) at 002).

998. NJOY has continued its 99-cent promotion for the NJOY Ace device into 2021. (Farrell (NJOY) Tr. 314; RX2026 (7-Eleven receipt dated June 2, 2021 showing $0.99 retail price for NJOY Ace)).

b. Reynolds' Vuse Alto

999. Reynolds launched the Vuse Alto pod product in August 2018. (Huckabee (Reynolds) Tr. 395). Reynolds had acquired it from Smoore after August 2016 and reintroduced the product in August 2018. (PX8008 (Huckabee (Reynolds) Decl. at 010 ¶18(d))).

1000. Vuse Alto comes in three different nicotine strengths: 1.8, 2.4, and 5.0 percent, each of which contain nicotine salts. (Huckabee (Reynolds) Tr. 395, 414). The cartridge is held in place by a magnetic tip. (PX8008 (Huckabee (Reynolds) Decl. at 010 ¶ 18(d))).

1001. Reynolds made statements in a July 2018 earnings call that consumer research showed that "Alto rate[ed] significantly higher than any other nicotine salt Pod . . . product on a number of key consumer attributes and purchase intent." (RX1456 (JLI) at 001).

1002. By December 2018, JLI's internal analysis of Alto's performance concluded that "Alto is the best performing launch by a major competitor in the past few years[.]" (RX1618 (JLI) at 030).

1003. In its first six months on the market, based on dollar sales of devices and cartridges, Vuse Alto achieved monthly sales of roughly 4.7 times that of MarkTen Elite. (RX1217 (Murphy Expert Report at 109 ¶ 165 & at 095 Fig. VII.2)).

1004. Reynolds recognized that a "[q]uick, strong response to NJOY Ace 99¢ traction was necessary to secure Alto's market potential" and implemented a 99-cent promotion on the Alto device (which has an MSRP of $24.99) on a rolling basis in select stores in July 2019, and then expanded the promotion throughout August and September 2019. (RX1711 (Reynolds) at 003, 020; *see also* Huckabee (Reynolds) Tr. 428 (agreeing that neither Altria nor JLI "manipulated Reynolds into running [a] 99 cent promotion")).

1005. In August 2019, as JLI observed, in the wake of Reynolds' 99-cent promotion (F. 1004), "Vuse began to grow significantly." (Robbins (JLI) Tr. 3268; RX1529 (JLI) at 007 ("Vuse begins to grow with new price point[.]")). *See also* RX1547 (JLI) at 003) (JLI noting in August 2019 that Reynolds' Vuse Alto was "replicating [NJOY's] tactics").

1006. IRI Projected Data shows that sales of Vuse Alto devices rose continuously from September 2019 through December 2019. (RX1217 (Murphy Expert Report at 054, 056 ¶ 71 & Fig. V.6)).

1007. IRI Projected Data shows that sales of cartridges for Vuse Alto devices rose from an average of fewer than 50,000 devices per week over the period January to July 2019 to more than 200,000 devices per week in December 2019. (RX1217 (Murphy Expert Report at 054-55 ¶ 71 & Fig. V.5)). *See also* Huckabee (Reynolds) Tr. 449, *in camera*

1008. By December 2019, Reynolds had overtaken JLI as the leading seller of devices. (RX1711 (Reynolds) at 004; PX7037 (Huckabee (Reynolds) Dep. at 70-72)).

1009. In 2021, Vuse was "selling more than twice the number of devices per week" than JLI. (PX7033 (O'Hara (JLI) Dep. at 199)).

1010. The increase in Vuse Alto's device sales were followed by "increased pod demand." (PX7033 (O'Hara (JLI) Dep. at 199)). By September 2020, Vuse Alto held a 21 percent market share of units of cartridges sold. (RX1217 (Murphy Expert Report at 057-58 ¶ 73 & Fig. V.8)).

1011. Reynolds has continued its 99-cent promotion for the Vuse Alto device into 2021. (Huckabee (Reynolds) Tr. 428).

c. Shift towards Pods with Nicotine Salts

1012. JUUL, Vuse Alto, NJOY Ace, and the ITG Brands *my*blu Intense cartridges all contain nicotine salts. (RX0962 (Altria) at 003 (listing nicotine-to-acid ratios of JUUL, Alto, and *my*blu Intense); Farrell (NJOY) Tr. 362 (confirming all NJOY products currently on the market, including Ace, contain nicotine salts)). JTI's Logic Pro does not contain nicotine salts. (RX1739 (ITG Brands) at 019).

1013. Crozier, the e-vapor category manager for Sheetz, believes that all the products that are currently leading in the pod-based category offer roughly the same nicotine satisfaction as JUUL. "[B]oth NJOY and Alto use nicotine salt technology, and that provides greater nicotine satisfaction for the user than products that do not." (Crozier (Sheetz) Tr. 1519). NJOY and Vuse would not have had the same level of success without providing that satisfaction. (Crozier (Sheetz) Tr. 1520-21).

1014. Reynolds' e-vapor subsidiary regarded MarkTen Elite, which does not contain nicotine salts, "as inferior in quality to other competing products[.]" (PX8008 (Huckabee (Reynolds) Decl. at 024-25 ¶ 48)).

1015. PMI concluded that none of Altria's products were successful at converting smokers and [redacted] (King (PMI) Tr. 2433-34, 2532-33, *in camera*).

1016. NJOY emphasizes its use of nicotine salts in its promotional materials to retailers. (Farrell (NJOY) Tr. 297-98 (explaining that salts were an important enough factor to emphasize in promotional material to retailers); RX1761 (NJOY) at 003 (highlighting, in a presentation for Wawa, that "[e]very NJOY device contains industry leading liquids with nicotine salts and high-quality flavors"); *see also* PX3216 (NJOY) at 003).

1017. IRI Projected Data analyzed by Dr. Murphy shows that in September 2020, the device market share for Vuse Alto was approximately 60 percent, JUUL had fallen to under 30 percent, NJOY Ace was at approximately 10 percent, ITG's *my*Blu was near 3 percent, and JTI's Logic Pro, the only one of these devices without nicotine salts, was less than one percent. (RX1217 (Murphy Expert Report 056-57 ¶ 72, Fig. V.7); *see also* Murphy Tr. 3152-53 (specifying that Logic Pro was at 0.3 percent)).

1018. Dr. Murphy observed from analyzing the market data, "within the pod-based products, those that had nicotine salts tended to be far more successful than those that did not." (Murphy Tr. 3138; *see also* PX7047 (Murphy Dep. at 44-45)).

N. Post-Transaction Market Evidence

1. Prices

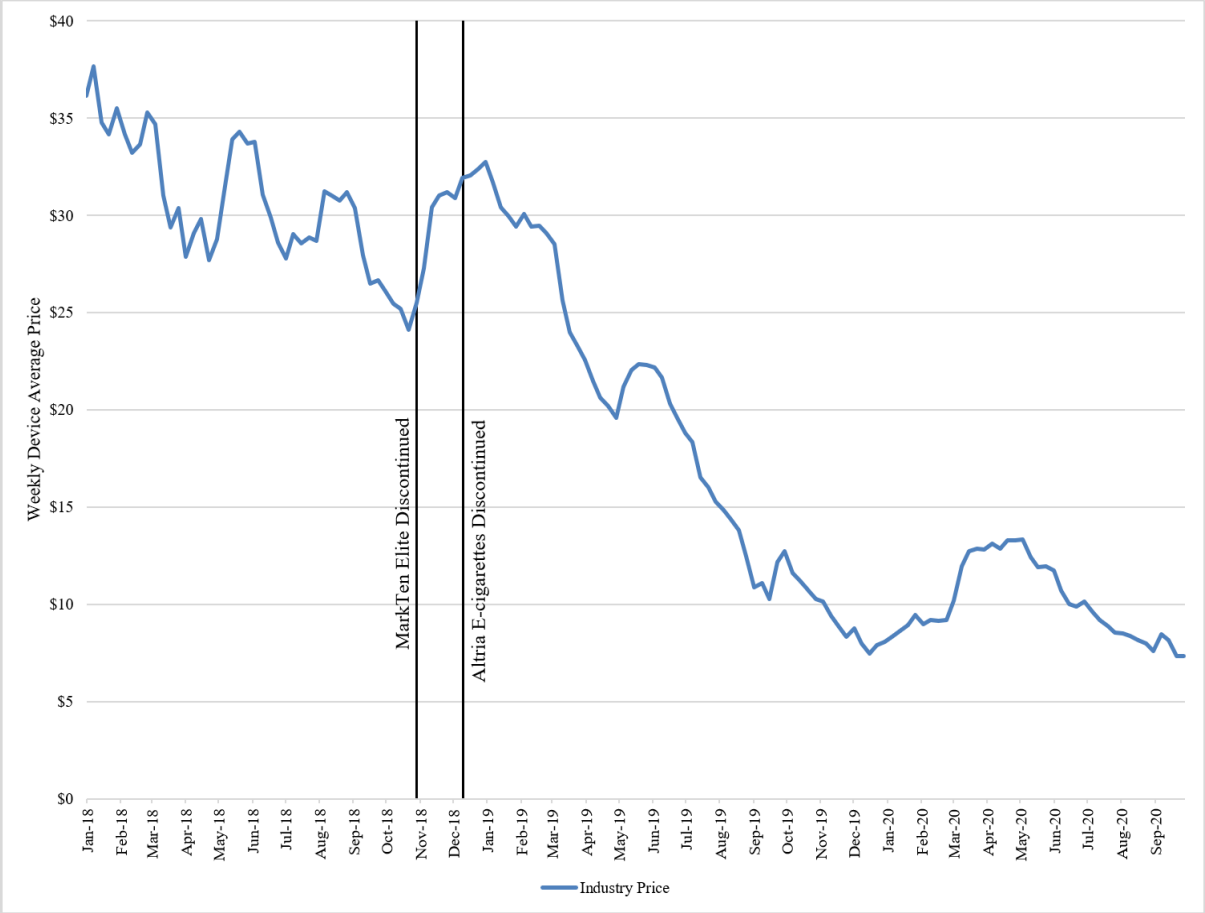
1019. In the summer of 2019, internal analysis of the e-vapor market by JLI recognized that JUUL was no longer "priced in line with consumer expectations of the category[.]" JLI abandoned its standard promotions and decided to "[c]lose out 2019 with deeper discounts[.]" (RX1529 (JLI) at 020, 023).

1020. In September 2019, JLI dropped its device price to $9.99, down from an MSRP of $34.99. (RX1061 (PMI) at 010; *see also* RX1711 (Reynolds) at 020 (similar); O'Hara (JLI) Tr. 571 ("[JUUL's] device price is even down to about $10 now."); PX7033 (O'Hara (JLI) Dep. at 121-22) (explaining that JLI "had to . . . bring down the price of [its] own device" in response to aggressive promotions)). In addition to running "deeper promotions," JLI later "permanently" lowered the price of its device. (Robbins (JLI) Tr. 3257).

1021. JLI's price decreases, combined with aggressive promotions by competitors, have "generally resulted in the overall market for devices being priced down significantly." (PX7033 (O'Hara (JLI) Dep. at 122); RX1061 (PMI) at 010 (observing in August 2019 that after NJOY "triggered [a] price war" in the e-vapor category, "JUUL's dollar share slipped for the first time")).

1022. The average price of a pod-based device "fell from about $27 in September 2018 to around $8 in September 2020, representing a roughly 72 percent price reduction." (RX1217 (Murphy Expert Report at 047-48 ¶ 62, Fig. V.1); *see also* Murphy Tr. 3146-47).

1023. The decline in the average industry price for pod devices (F. 1022) is depicted in the following chart showing industry price, based on IRI Projected Data analyzed by Dr. Murphy:



(RX1217 (Murphy Expert Report at 047-48 ¶ 62, Fig. V.1)).

1024. The average price of pod cartridges fell by over 15 percent from November 2018 to September 2020. (Murphy Tr. 3145-46; RX1217 (Murphy Expert Report at 048-49 ¶ 63, Fig. V.2)).

2. Output

1025. By October 2019, sales of pod-based devices had increased by more than 20 percent. Over the same time period, sales of pod cartridges increased by more than 30 percent. (RX1217 (Murphy Expert Report at 049-50 ¶ 65)).

1026. From October 2018 to October 2019, overall sales of cartridges used for pod-based devices increased by approximately 3.7 million cartridges per week. (RX1217 (Murphy Expert Report at 049-50 ¶ 65, Fig. V.3)).

1027. At the time Altria withdrew Elite in October 2018, sales of Elite cartridges were 100,000 a week. Less than two years later, sales by non-JUUL competitors had increased by 3.1 million cartridges a week (from 1 million to 4.1 million). (RX1217 (Murphy Expert Report at 066-67 ¶ 85, Fig. V.10); Murphy Tr. 3126-28). This data supports the opinion of Dr. Murphy that "these other sellers were able to expand the sales of their products on the market dramatically, 31 times what would be required to offset the loss of Elite in this case." (Murphy Tr. 3127-28).

1028. Using IRI Projected Data, Dr. Murphy found that among the top 20 retailers that carried MarkTen products in 2018, the average number of manufacturers per store with distribution of pod-based products increased from 3 to 3.8, comparing the period of October 2017 through September 2018 to the period of October 2019 through September 2020. (Murphy Tr. 3140; RX1217 (Murphy Expert Report at 059 ¶ 75)).

1029. [redacted]

3. Shelf Space

1030. Altria, as the largest tobacco company in the United States, had access to the best shelf space in the top retailers. (PX7004 (Willard (Altria) IHT at 22-23) ("And given the strength of some of our brands, we typically get quite good display space."); *see also* PX5000 (Rothman Expert Report at 099-101 ¶ 185) ("[L]arge tobacco companies like Altria can pay for shelf space by offering retailers rebates on traditional cigarettes."); [redacted], *in camera* (In addition to the upfront payments, Altria provided [redacted] with rebates on traditional cigarettes to secure shelf space for its e-cigarettes.)).

1031. Through its Innovative Tobacco Product ("ITP") program, Altria had obtained contracts with retailers for dedicated retail shelf space. (Schwartz (Altria) Tr. 1951; PX7013 (Brace (Altria) Dep. at 81-82); PX7009 (Burns (JLI) IHT 036-37); PX7003 (Quigley (Altria) IHT at 50-51); PX8001 (Stout (7-Eleven) Decl. at 003 ¶ 15)). Pursuant to the Amended Services Agreement (F. 960), Altria leased shelf space for ITP to JLI for approximately one year, from early 2019 to early 2020. (Willard (Altria) Tr. 1231-32; PX0012 at 001-02

(January 28, 2020 amendment terminating aspects of services agreement, including the lease of ITP shelf space)).

1032. After Altria's products were withdrawn from the market and the Amended Services Agreement (F. 960) was terminated, there was increased competition for ITP shelf space. (Myers (Altria) Tr. 3369; Willard (Altria) Tr. 1231-32; PX2272 (JLI) at 001).

1033. While in 2018, MarkTen was "often at the top of the shelves," in 2019, Reynolds' Vuse "was often in the top half of the shelf." (Farrell (NJOY) Tr. 257).

1034. E-cigarette companies that do not sell cigarettes, NJOY and Turning Point Brands, have struggled to get shelf space for their e-cigarettes. (Farrell (NJOY) Tr. 272-73, 276; PX8003 (Wexler (Turning Point) Decl. at 005 ¶ 28); PX7029 (Farrell (NJOY) Dep. at 127-28, 167-69); PX8004 (Farrell (NJOY) Decl. at 005 ¶ 26)).

1035. In 2019, NJOY was able to establish a presence in major chains Wawa, 7-Eleven, Circle K, and QuikTrip. (Farrell (NJOY) Tr. 318-20).

1036. At Sheetz, while the Altria-JLI shelf-space lease was in place in 2019 (F. 1031), JUUL "occupie[d] the top three shelves in Sheetz's vapor displays." (PX8000 (Sheetz) Crozier Decl. at 003 ¶ 17)). Reynolds got "the next two shelves for its Vuse products. NJOY, Blu, Logic, Leap, and dry nicotine pouches [were] all located below Vuse." (PX8000 (Crozier (Sheetz) Decl. at 003 ¶ 17).

1037. At Wawa in 2018, Nu Mark, Reynolds, and NJOY paid to have their products displayed on "the best shelf space." After Nu Mark's products were withdrawn from the market, other companies also were on Wawa's shelves: "The third position [was] occupied by NJOY or ITG's Blu brand, and JTI's Logic [was] at the bottom of the display." (PX8006 (Kloss (Wawa) Decl. at 005 ¶ 20)).

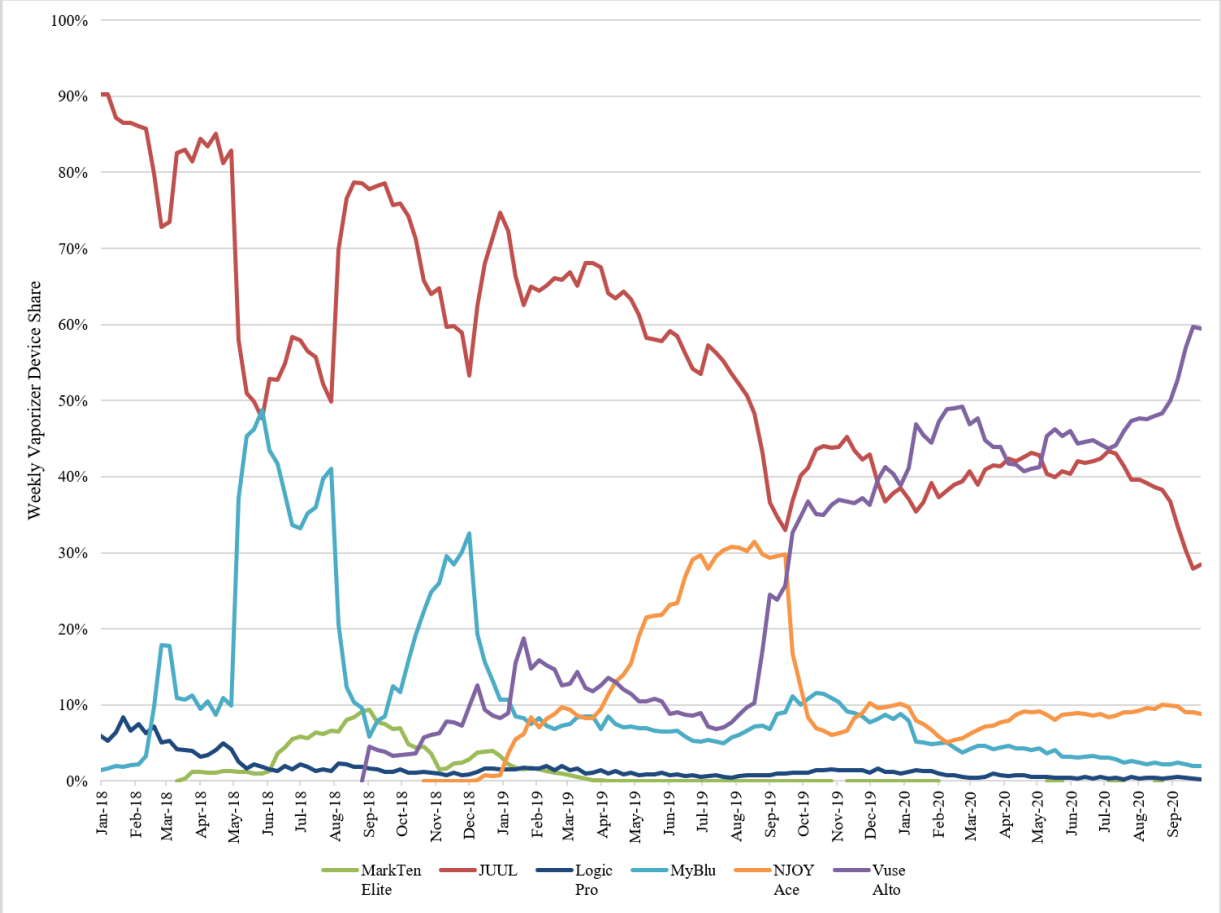
4. Market Share[45] and Concentration

1038. JLI's share of pod device sales decreased from approximately 69 percent in October 2018, to approximately 43 percent in October 2019, to approximately 30 percent in September 2020. (RX1217 (Murphy Expert Report at 056-57 ¶ 72)). At different points during that same time period, NJOY Ace's device share reached as high as 31 percent and Vuse Alto's device share rose to nearly 60 percent. (RX1217 (Murphy Expert Report at 056-57 ¶ 72)).

1039. The decline in JLI's share of pod device sales (F. 1038) is depicted in the following chart

[45] The relevant market in this case is all closed system devices. (F. 105). Dr. Murphy's calculation of market share in F. 1038-1040 looked only at pods - either devices or cartridges. If Dr. Murphy analyzed market shares based on the market of all closed system e-cigarettes, which includes cig-a-likes, JLI's share of that market would have been even smaller, because JLI sold only pod devices.

showing device sales shares by units, based on IRI Projected Data analyzed by Dr. Murphy:



(RX1217 Murphy Expert Report at 056-57 ¶ 72, Fig. V.7).

1040. JLI's market share of pod cartridge sales decreased 20 percent from December 2018 to September 2020. (RX1217 (Murphy Expert Report at 057-58 ¶ 73)). During that same time period, NJOY Ace grew its cartridge share to 7.4 percent in September 2019 and Vuse Alto gained cartridge share almost continuously and held a 21.0 percent share at the end of September 2020. (RX1217 (Murphy Expert Report at 057-58 ¶ 73 & Fig. V.8)).

1041. Complaint Counsel's expert witness, Dr. Rothman, agrees that JLI has lost market share since December 2018. (PX7048 (Rothman Trial Dep. at 96); PX7046 (Rothman Dep. at 14)).

1042. Using actual market data from IRI Projected Data for cartridge volume by unit, Dr. Murphy calculated that the HHI for the relevant market in this case – all closed system e-vapor products – decreased by nearly 500 points from October 2018 to September 2020. (RX1217 (Murphy Expert Report at 051-52 ¶ 68, Fig. V.4) (Fig. V.4 showing that the HHI fell from 5,493 in October 2018, to 5,322 in October 2019, to 5,022 in September 2020, a decrease of 471 points)). Looking at only pod-based e-vapor products,

Dr. Murphy calculated that the HHI decreased by 3,052 points from 8,492 in October 2018, to 6,240 in October 2019, to 5,440 in September 2020. (RX1217 (Murphy Expert Report at 051, 052 ¶ 67, Fig. V.4)).

5. Industry Views

1043. Andrew Farrell, Chief Revenue Officer at NJOY, views the current competition in the e-vapor market as "intense." (Farrell (NJOY) Tr. 302-03). That is evident from the "deals" the leading brands are "offering to customers," their competition for the amount and visibility of shelf space, and "a whole number of other dynamics that [Farrell] consider[s] to characterize intense competition." (PX7029 (Farrell (NJOY) Dep. at 142-43)).

1044. Lamar Huckabee, Senior Vice President and General Manager of Traditional Categories at Reynolds, characterized the e-vapor market as "experiencing aggressive pricing," with "aggressive discounting on devices," designed to generate trial of the product by consumers. (Huckabee (Reynolds) Tr. 425-26).

1045. Jeff Eldridge, an area Vice President for ITG Brands, characterized the e-vapor market in December 2020 as having "lots of brands" engaging in "pricing action," with JUUL losing share in the last couple of years. (PX7012 (Eldridge (ITG Brands) Dep. at 109-11)).

1046. Paul Crozier, Category Manager at Sheetz, views the e-vapor marketplace as "increasingly competitive since Altria removed its vaping products." (Crozier (Sheetz) Tr. 1548).

1047. Jack Stout, Senior Vice President for Merchandising and Demand Chain for 7-Eleven, views the e-vapor market as "competitive" as of March 2020 and has no "reason to think that the category has become less competitive than it was in 2018." (PX7044 (Stout (7-Eleven) Dep. at 15, 33)).

1048. Complaint Counsel's expert witness, Dr. Rothman, acknowledges that since the time of the Transaction, "overall prices are lower, overall output is higher, [and] market concentration is lower." (PX7046 (Rothman Dep. at 28); *see also* PX7048 (Rothman Trial Dep. at 96-97)).

O. Future Competition

1049. At least five years is required to bring an e-vapor product to market and it can take as long as ten years, although an estimate of five to seven years is average. (Garnick (Altria) Tr. 1660-61 (agreeing it "would take five to ten years" to develop a product and "then do the necessary studies for a PMTA"); Gifford (Altria) Tr. 2777-78 (explaining new products likely would take "five to seven years" to bring to market because of the Deeming Rule); Murillo (Altria/JLI) Tr. 2936 (taking a product "from scratch . . . all the way to a market order" would take "five to ten years, you know, maybe seven on average")).

1050. VEEV is a pod-based e-cigarette product sold by PMI outside the United States. (King (PMI) Tr. 2343-44, 2346, 2355).

1051. PMI started selling VEEV internationally in late 2020. (King (PMI) Tr. 2355).

1052. PMI does not currently sell VEEV in the United States. (King (PMI) Tr. 2355).

1053. VEEV uses PMI's proprietary technology, referred to as "mesh technology." The name "mesh" refers to the mesh heater, rather than the standard wick and coil. (King (PMI) Tr. 2350). It is "like a fine-wire screen, in effect, where you pass electricity through the screen, and that creates the aerosol." (King (PMI) Tr. 2350-51).

1054. PMI's mesh technology was also used in the Apex product, but VEEV and Apex otherwise have a number of differences. (King (PMI) Tr. 2545-47; PX7020 (King (PMI) Dep. at 78-79)).

1055. PMI improved VEEV's form compared to Apex, "making it something that people could carry comfortably." VEEV is smaller, fits the hand better, and has a more appealing shape than Apex. (King (PMI) Tr. 2547).

1056. Under the Joint Research, Development and Technology Sharing Agreement between Altria and PMI ("JRDTA"), [redacted] (PX7020 (King (PMI) Dep. at 34), *in camera*; RX0873 (Altria) at 019-20 (JRDTA), *in camera*).

1057. The JRDTA did not include any terms as to distribution or "details of commercialization" for any e-vapor product. (PX7020 (King (PMI) Dep. at 195-96)). [redacted] (King (PMI) Tr. 2512-14, 2467-69, *in camera*; PX7020 (King (PMI) Dep. at 200) ("There would have to be additional discussions before the commercialization could take place.")).

1058. For the right to sell Apex in the United States, Altria signed a separate "distribution agreement with [PMI] in 2016[.]" (Jupe (Altria) Tr. 2133). [redacted]

1059. At the time of Altria's investment in JLI in late 2018, VEEV was "several years away" from commercialization, given that "it's now 202[1] and [PMI is] still finalizing" the PMTA application. (King (PMI) Tr. 2542).

1060. [redacted] (King (PMI) Tr. 2387, *in camera*; *see also* King (PMI) Tr. 2539-40 ("[I]t's not possible to really give you an exact timing given the uncertainties of the regulatory process.")).

1061. At the time of trial, [redacted] (King (PMI) Tr. 2387, *in camera*).

1062. PMI and Altria are separate companies and have been since 2008. (F. 72 n.40).

IV. SUMMARY OF CONCLUSIONS OF LAW

1. Complaint Counsel bears the burden of proving jurisdiction and liability by a preponderance of evidence.

2. Section 5(a)(2) of the FTC Act gives the Commission jurisdiction "to prevent persons, partnerships, or corporations . . . from using unfair methods of competition in or affecting commerce . . . ." 15 U.S.C. § 45(a)(2).

3. Section 11 of the Clayton Act vests jurisdiction in the FTC to determine the legality of a corporate acquisition under Section 7. 15 U.S.C. § 21(b).

4. Section 7 of the Clayton Act prohibits mergers or acquisitions "the effect of [which] may be substantially to lessen competition, or to tend to create a monopoly" in "any line of commerce or . . . activity affecting commerce in any section of the country." 15 U.S.C. § 18.

5. Corporations are included within the definition of "persons" that are subject to jurisdiction under the Clayton Act, 15 U.S.C. § 12(a), and the FTC Act, 15 U.S.C. § 44.

6. Each Respondent is a corporation, as "corporation" is defined in Section 4 of the FTC Act, 15 U.S.C. § 44.

7. Respondents' sales of e-cigarettes are in or affecting commerce in the United States, as "commerce" is defined in Section 4 of the FTC Act, 15 U.S.C. § 44.

8. The Commission has jurisdiction over each Respondent and the subject matter of this proceeding, pursuant to Section 5 of the of the FTC Act, 15 U.S.C. § 45 and Sections 7 and 11 of the Clayton Act, 15 U.S.C. § 18, 21(b).

9. The FTC Act's prohibition of unfair methods of competition encompasses violations of Section 1 of the Sherman Act.

10. Section 1 of the Sherman Act prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States . . . ." 15 U.S.C. § 1.

11. Both a Section 1 rule of reason analysis and a Section 7 analysis require a determination of the relevant product market and the relevant geographic market.

12. The relevant product market identifies the product and services with which the Respondents' products compete, while the relevant geographic market identifies the geographic area in which the Respondents compete in marketing their products or services.

13. The relevant product market in this case is a closed system e-cigarettes market that includes both cig-a-likes and pod-based products.

14. The relevant geographic market in this case is the United States.

15. Section 1 of the Sherman Act requires proof that (1) there was a contract, combination, or conspiracy – or, more simply, an agreement; and, if so, (2) the agreement unreasonably restrained trade in the relevant market.

16. To establish an agreement forming an antitrust conspiracy, the evidence must prove that the alleged conspirators had a conscious commitment to a common scheme designed to achieve an unlawful objective. Put another way, the evidence must prove a unity of purpose or a common design and understanding, or a meeting of minds in an unlawful arrangement.

17. An agreement may be demonstrated by direct or circumstantial evidence.

18. Circumstantial evidence of a conspiracy, when considered as a whole, must tend to rule out the possibility of independent action.

19. To determine whether an antitrust conspiracy exists, courts must consider the totality of the evidence.

20. Where an inference of conspiracy is equally consistent with an inference of independent conduct, the evidence of conspiracy would not preponderate. In order to find a conspiracy, the inference of a conspiracy must be more probable than the inference of independent action.

21. The crucial question in a Section 1 case is whether the challenged anticompetitive conduct stems from independent decision or from an agreement, tacit or express.

22. A litigant may not proceed by first assuming a conspiracy and then explaining the evidence accordingly.

23. At all times, the ultimate burden of persuading the factfinder that a conspiracy exists is on the plaintiff, which, in the instant case, is the government.

24. Where proof is lacking, the fact that a conspiracy may be difficult to prove does not mean that it is fair or appropriate to fill in the blanks where evidence is missing to assist the government in winning its case.

25. Actions against unilateral interest by an alleged participant in a conspiracy means conduct that would be irrational assuming that the Respondent operated in a competitive market. The conduct at issue must be so unusual that in the absence of an advance agreement, no reasonable firm would have engaged in it.

26. Proof of pretext standing alone is not sufficient to establish an agreement but can only strengthen an inference of joint action that is otherwise in evidence. At best, proof of pretextual excuses for challenged conduct can constitute circumstantial evidence that can disprove the likelihood of independent action.

27. The government cannot make its case just by asking the fact finder to disbelieve the Respondents' evidence.

28. Where there is an independent business justification for a Respondent's behavior, an inference of conspiracy is not easily drawn.

29. Antitrust inquiries must carefully account for the pervasive federal and state regulation characteristic of an industry.

30. The evidence fails to prove that Respondents had an unwritten agreement for Respondent Altria to stop competing with its then-existing products, as alleged in the Complaint.

31. Under a Section 1 rule of reason analysis, the government must prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market.

32. Under Section 7, the government must show a reasonable probability that the challenged transaction would substantially lessen competition in the future.

33. To establish a violation of Section 7, the FTC need not show that the challenged merger or acquisition will lessen competition, but only that the loss of competition is a sufficiently probable and imminent result of the merger or acquisition.

34. The government can establish a presumption of liability by defining a relevant product and geographic market and showing that the transaction will lead to undue concentration in that market.

35. Once the government establishes the prima facie case, the respondent may rebut it by producing evidence to cast doubt on the accuracy of the government's evidence as predictive of future anticompetitive effects.

36. Evidence on a variety of factors can rebut a prima facie case, including ease of entry into the market, the trend of the market either toward or away from concentration, the continuation of active price competition, or unique economic circumstances that undermine the predictive value of the government's statistics. Rebuttal evidence may also include other factors relating to competition in the relevant market.

37. If the respondent successfully rebuts the prima facie case, the burden of production shifts back to the government and merges with the ultimate burden of persuasion, which remains with the government at all times.

38. Complaint Counsel failed to demonstrate that the Transaction would lead to undue concentration in the market and therefore is not entitled to a presumption of anticompetitive effects.

39. Section 7 requires that the government show that the elimination of competition creates an appreciable danger of anticompetitive consequences in the future.

40. Courts must judge the probable anticompetitive effect of a challenged transaction functionally and based on a further examination of the particular market – its structure, history and probable future. Evidence of past production does not, as a matter of logic, necessarily give a proper picture of a company's future ability to compete.

41. The evidence fails to prove that Respondent Altria's removal of products from the market or discontinuation of Nu Mark has substantially harmed or is reasonably likely to substantially harm competition.

42. The evidence fails to prove that the elimination of competition from Respondent Altria creates an appreciable danger of anticompetitive consequences in the future.

43. Establishing liability through the actual potential competition doctrine requires establishing four separate facts. First, the FTC must establish that the relevant product and geographic markets are concentrated. In addition to establishing that the target market is concentrated, the FTC must second establish that independent entry would result in a substantial likelihood of ultimately producing deconcentration of the target market or other significant procompetitive effects. Third, the alleged actual potential entrant must be one of only a few equally likely actual potential entrants, since eliminating one of many potential entrants could not be expected to eliminate substantial future competition. Fourth and finally, the FTC must establish that the alleged actual potential entrant would have entered the market independently, either de novo or by making a toehold acquisition, but for the challenged merger. Establishing this last factor requires proof, not only that the alleged actual potential entrant possesses the capabilities,

economic incentives, and interest to feasibly enter the relevant market, but also that entry would have occurred within the near future.

44. Finding a "reasonable probability" that the alleged potential entrant would have "eventually entered" the relevant market is insufficient because such an "eventual entry" test is wholly speculative. Uncabined speculation cannot be the basis of a finding that Section 7 has been violated.

45. To sustain a claim based on potential future competition, the evidence must demonstrate a reasonable probability that the alleged entry will occur in the near future since remote possibilities are not sufficient to satisfy the test set forth in Section 7.

46. Complaint Counsel failed to aver or demonstrate a reasonable probability that Respondent Altria's efforts would result in its competing in the e-cigarette market in the near future, or even identify any reasonable range of time by which such alleged competitive entry was probable to occur.

47. The evidence fails to prove a reasonable probability that the Transaction would substantially lessen competition in the future, and therefore, Complaint Counsel has failed to meet its burden of proving that the Transaction is unlawful under Section 7.

48. Because the evidence fails to prove a reasonable probability that Altria would have competed in the e-vapor market in the near future, Complaint Counsel has failed to meet its burden under the Section 1 rule of reason analysis of proving anticompetitive effects from the non-compete provision.

49. Because Complaint Counsel has failed to meet its initial burden under the Section 1 rule of reason analysis, Complaint Counsel has failed to sustain its claim that the non-compete provision constitutes an unreasonable restraint.

ORDER

For the reasons stated above, IT IS ORDERED that the Complaint be, and hereby is, DISMISSED.

ORDERED:

D. Michael Chappell
Chief Administrative Law Judge

Date: February 23, 2022