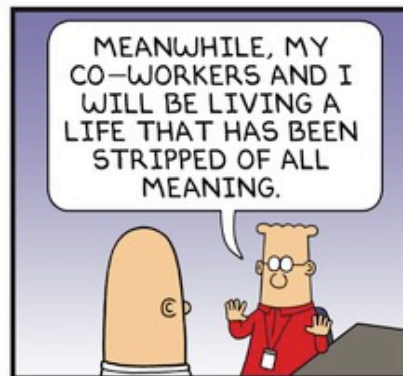

Merger Antitrust Law (2022)

Professor Dale Collins
Georgetown University Law Center

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BY SCOTT ADAMS



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Class 1 slides

Unit 1: TransDigm/Takata

Professor Dale Collins
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TRANS**DIGM* ***GROUP INC.

SCHIROTH



The Deal

Who was the buyer?

- TransDigmGroup Incorporated
 - Leading supplier of highly engineered airplane components
 - Delaware corporation
 - Headquarters: Cleveland, OH
 - Revenues (2016): \$3.1 billion



Who was the seller?

■ Takata Corporation

- ❑ Global manufacturer of automotive safety systems and products for automakers worldwide
 - Also diversified into aviation systems
- ❑ Headquartered in Japan
- ❑ Production facilities on four continents

- ❑ Manufacturer of the airbags subject to the massive recalls
 - U.S. recall of more than 42 million cars
- ❑ Bankruptcy
 - June 2017: Filed for bankruptcy protection in Japan
 - April 2018: Acquired by Key Safety Systems
 - ❑ Subsidiary of Ningbo Joyson Electronic Corp.
 - ❑ Rebranded as Joyson Safety Systems



What was the seller going to sell?

- The SCHROTH passenger restraint systems business
 - ❑ Designs and manufactures proprietary, highly engineered, advanced safety systems for aviation, racing, and military ground vehicles throughout the world
 - ❑ Acquired by Takata in 2012
 - ❑ Facilities in three locations
 - Arnsberg, Germany
 - Pompano Beach, Florida
 - Orlando, Florida
 - ❑ Employees: 260
 - ❑ Revenues (2016): \$37 million



What was the transaction?

- TransDigm Group to acquire—
 1. Stock of SCHROTH Safety Products GmbH, *and*
 2. Assets of Takata Protection Systems, Inc.from Takata Corporation
- Purchase price: \$90 million
- Transaction closed: February 22, 2017

Summary of the deal structure: Before

BUYER

TransDigm

AmSafe

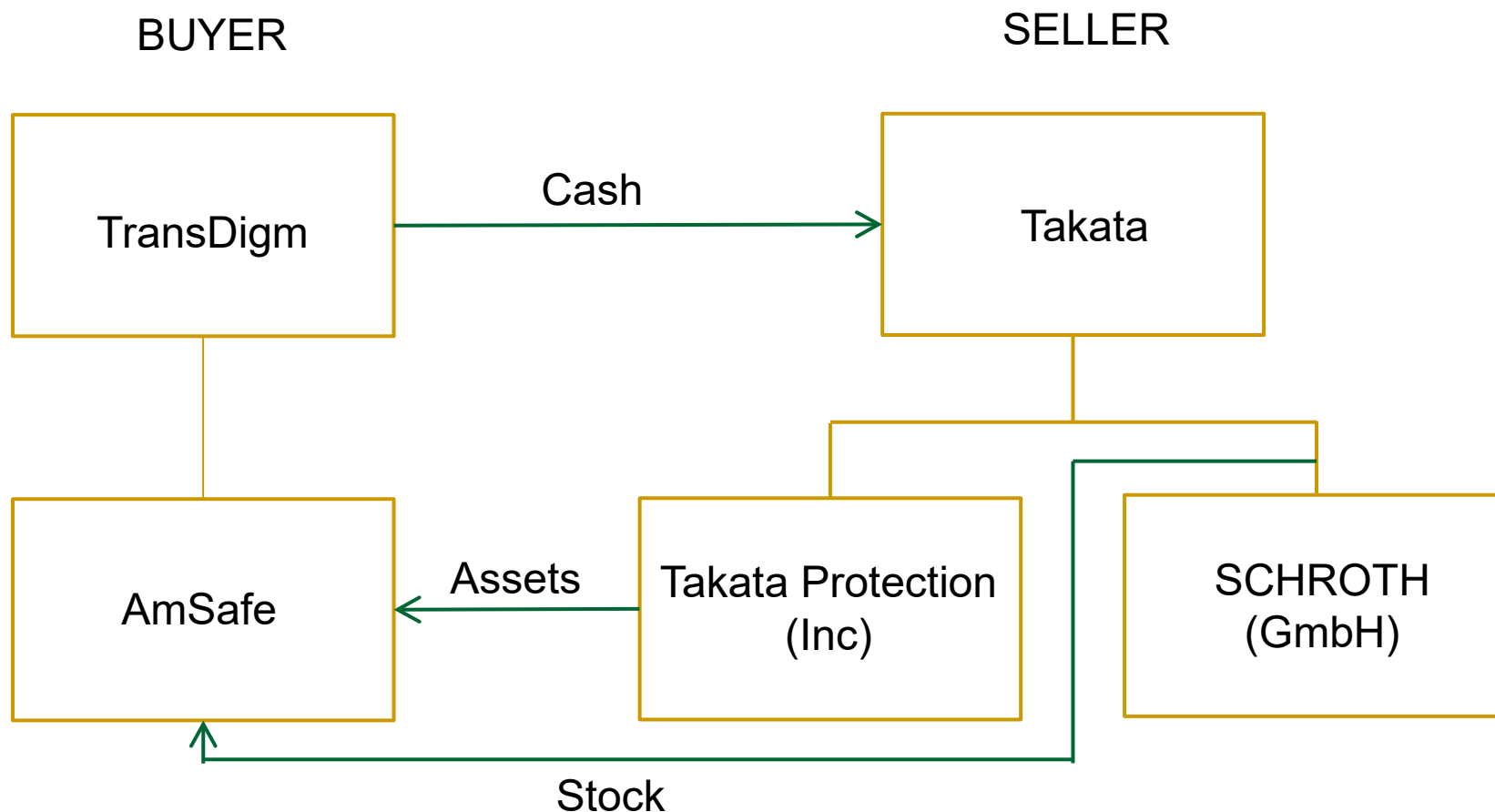
SELLER

Takata

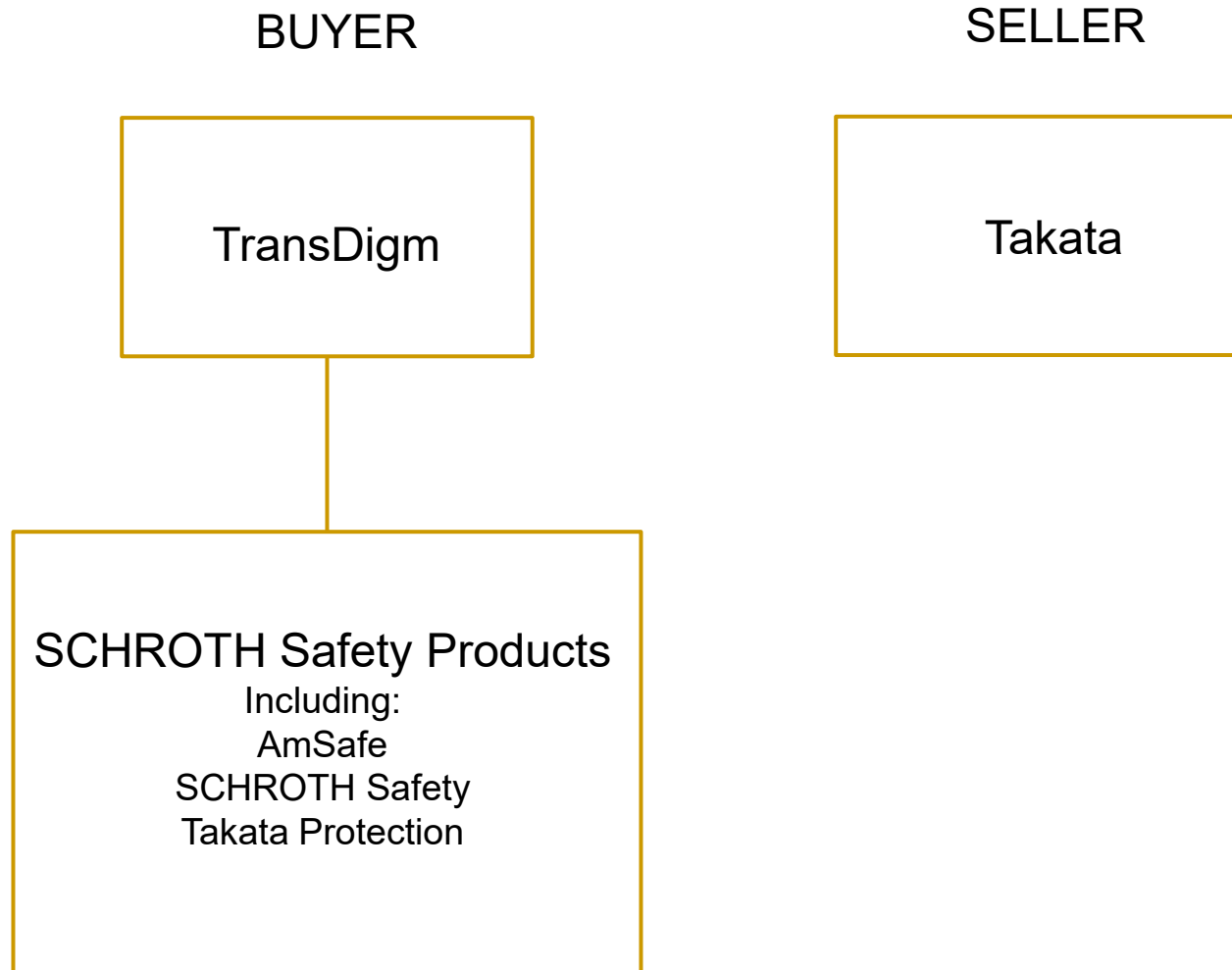
Takata Protection
(Inc)

SCHROTH
(GmbH)

Summary of the deal structure: Deal



Summary of the deal structure: After

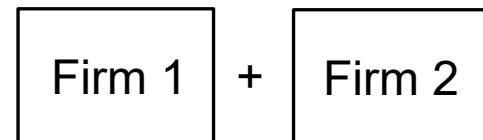


Is this a horizontal transaction?

- Yes

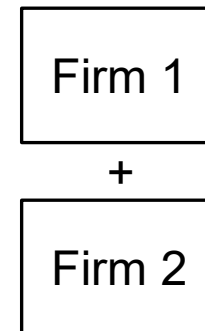
- Horizontal transactions:

- Combine two competitors
- Sell *substitute* products



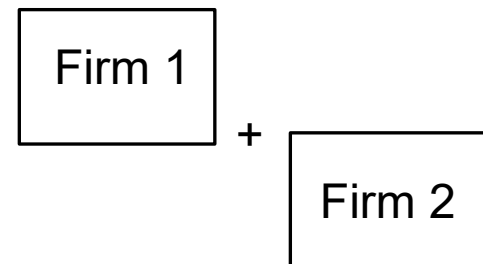
- Vertical transactions:

- Combine two firms at adjacent levels in the chain of manufacture and distribution
- May be extended to two firms that sell *complementary* products



- Conglomerate transactions

- Mergers that are neither horizontal nor vertical



Why did Takata want to sell SCHROTH?

- TO MAKE MONEY

- How?

- Purchase price more valuable than keeping the business
- Why might that be the case?
 - SCHROTH needed to compete aggressively to gain business from TransDigm:
 - Cost money to operate business and conduct R&D
 - Had to price aggressively
 - Probably not making much in profits
 - Had been at it for five years (Compl. ¶ 3)
 - May also have been an effort to obtain cash to stave off bankruptcy in light of the airbag litigations
 - Sale closed in February 2017, three months before Takata's bankruptcy filing

Why did TransDigm want to buy SCHROTH?

■ TO MAKE MONEY

■ How?

- Acquisition would reduce pricing and innovation pressure from an aggressive new competitor
 - TransDigm's AmSafe subsidiary
 - World's dominant supplier of restraint systems used on commercial airplanes
 - Global revenues (2016): \$198 million
 - Headquarters: Phoenix, AZ
 - SCHROTH, after being acquired by Takata in 2012, embarked on an ambitious plan to capture market share from AmSafe (Compl. ¶ 3)
 - Competing on price
 - Investing in R&D
 - At the time of the signing of the acquisition agreement, SCHROTH was:
 - AmSafe's closet overall competitor
 - AmSafe's only meaningful competitor for certain types of restraint systems

The Law

Statutes

- What federal antitrust statutes could apply to the TransDigm/ SCHROTH transaction?
 - ❑ Clayton Act § 7
 - ❑ Sherman Act § 1
 - ❑ Sherman Act § 2
 - ❑ FTC Act § 5

Clayton Act § 7

- Provides the U.S. antitrust standard for mergers

No person engaged in commerce or in any activity affecting commerce **shall acquire**, directly or indirectly, the whole or any part of the **stock** or other share capital and no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the **assets** of another person engaged also in commerce or in any activity affecting commerce, **where in any line of commerce** or in any activity affecting commerce **in any section of the country**, the **effect** of such acquisition **may be substantially to lessen competition, or to tend to create a monopoly**.¹

- *Simple summary*: Prohibits transactions that—

- “may substantially lessen competition or tend to create a monopoly”
- “in any line of commerce” (product market)
- “in any part of the country” (geographic market)

Called the *anticompetitive effects test*

Called the *relevant market*

¹ 15 U.S.C. § 18 (remainder of section omitted)

The Sherman Act

■ Sherman Act § 1

Every **contract, combination** in the form of trust or otherwise, or **conspiracy**, in **restraint of trade** or commerce among the several States, or with foreign nations, is declared to be illegal.¹

■ Sherman Act § 2

Every person who shall **monopolize**, or **attempt to monopolize**, or **combine or conspire** with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony.²

¹ 15 U.S.C. § 1.

² *Id.* § 2.

The FTC Act

■ FTC Act § 5

Unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful.²

- NB: Unlike other provisions, not included in the definition of “antitrust law” in Clayton Act § 1
 - This will be important when it comes to private actions

¹ 15 U.S.C. § 45(a)(1).

Section 7 is the binding constraint

- The Sherman Act and FTC Act, as applied to mergers, are either coextensive or less restrictive than Section 7 of the Clayton Act

*Section 7 provides the antitrust test for all mergers**

* There is arguably an exception for acquisitions of “nascent” competitors (where Section 2 *might* be more restrictive—we will be looking for a test case)

- Consequently:
 - Invocation of the Sherman Act or the FTC Act is usually superfluous
 - Plaintiffs—including the DOJ and FTC—typically allege only a Section 7 violation
- State antitrust law
 - Not preempted by federal law
 - But no state has enacted a statute stricter than Section 7

The DOJ Investigation

Timing

- Was this transaction challenged before or after consummation?
 - After
 - Transaction closed Feb. 22, 2017
 - Complaint filed ten months later on December 21, 2017
- Why didn't the DOJ challenge the transaction before closing?
 - Probably did not know about it, *or*
 - Was aware of the transaction but not aware of its likely effect on competition
- Didn't the HSR Act filings alert the DOJ to the transaction before closing?
 - No. Apparently not reportable under the Hart-Scott-Rodino Act¹

¹ Clayton Act § 7A, 15 U.S.C. § 18a.

Hart-Scott-Rodino Act

- Requires large mergers and acquisitions to—
 1. File a *premerger notification report* with the DOJ and FTC
 2. Observe a *statutorily prescribed waiting period* before closing the transaction
 - a. *Initial waiting period*: 30 calendar days after filing (for most transactions)
 - b. *Final waiting period*: 30 calendar days after all merging parties have responded to their respective second requests (for most transactions)

NB: A *second request* is a subpoena-like document that—

 1. Contains document requests, narrative interrogatories, and data interrogatories
 2. Can only be issued during the initial waiting period
 3. Can only be issued once
- Idea:
 - Much more effective and efficient to block or fix an anticompetitive deal before closing than to try to remediate it after closing

Hart-Scott-Rodino Act

- Why wasn't the TransDigm/SCHROTH transaction reported under the HSR Act?
 - The purchase price was \$90 million in cash
 - The HSR threshold in 2017 was \$80.8 million
 - In 2022, the threshold is \$101.0 million
 - BUT—
 - Transaction involved the acquisition of—
 - *Stock* of SCHROTH Safety Products GmbH, *and*
 - *Assets* of Takata Protection Systems Inc.
 - Foreign asset exemption
 - The acquisition of assets located outside the U.S. do not account unless they have sales in or into the United States of \$80.8 million in 2017
 - Target had facilities in Florida and Germany
 - *Sales*: SCHROTH's total sales worldwide were \$43 million (press release)
 - *Assets*: If non-U.S. assets accounted for more than \$9.2 million of the purchase price, the assets would be exempt and the acquisition would not have been reportable

Hart-Scott-Rodino Act

- Not jurisdictional
- Agencies can review and challenge transactions—
 1. Falling below reporting thresholds
 2. Exempt from HSR reporting requirements
 3. “Cleared” in an HSR merger review
 - “Clearance”—a commonly used term—is a misnomer
 - No immunity attaches to a transaction that has successfully gone through an HSR merger review

The fact that the TransDigm/Takata deal was not HSR reportable did not preclude the DOJ from investigating and challenging the transaction even months after closing

DOJ investigation

- How did the DOJ find out about this transaction?
 - Maybe Boeing complained
 - Largest U.S. customer
 - Biggest beneficiary of SCHROTH's competition with AmSafe
 - Biggest loser from the merger
 - But it could have been others:
 - A smaller customer
 - A disgruntled current or former TransDigm employee
 - Probably not a third-party competitor (WHY NOT?)



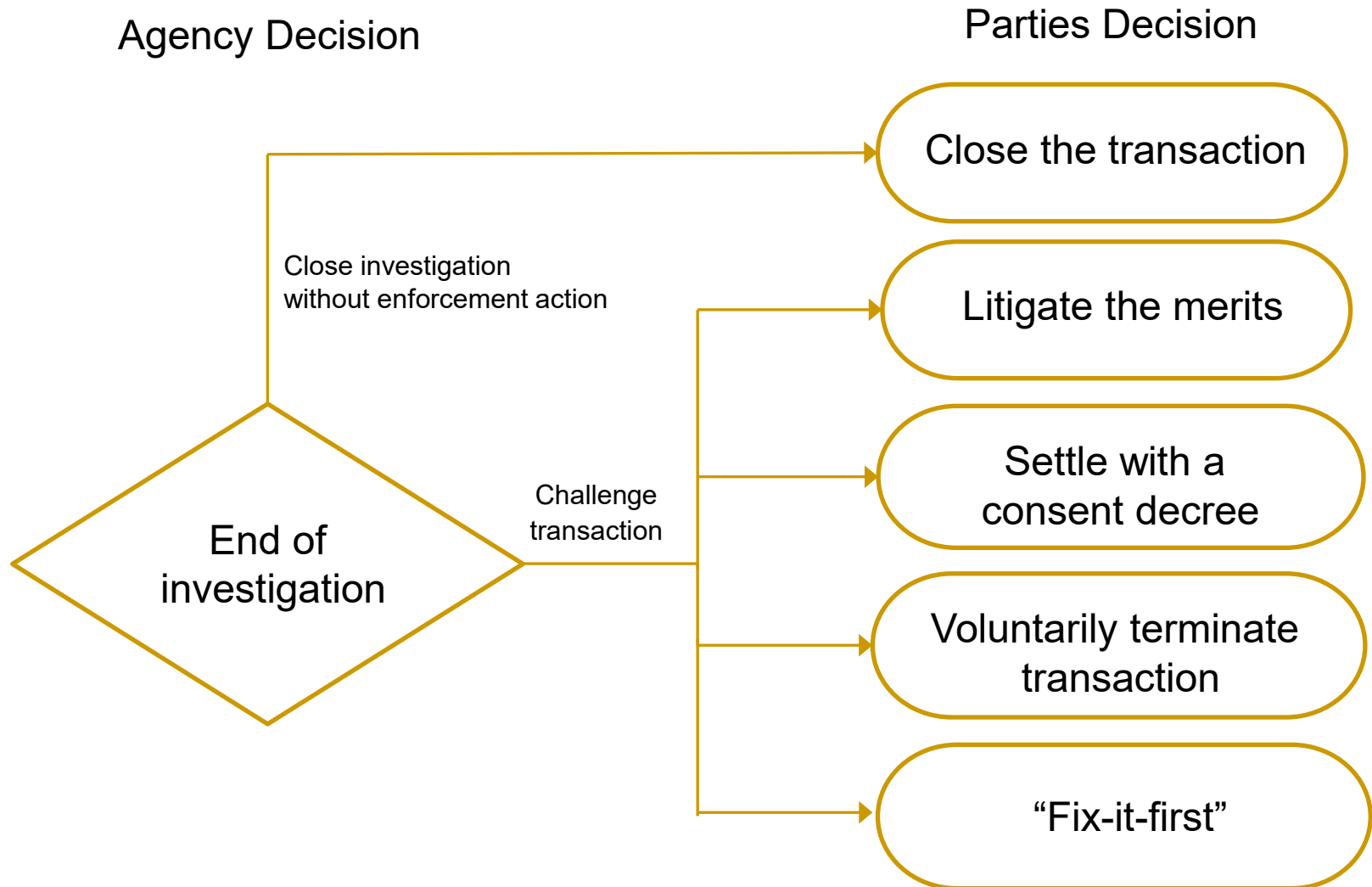
DOJ investigation

- What did the DOJ do after it learned about the transaction?
 - Opened an investigation

DOJ investigation

- How did the DOJ obtain testimony, documents, and data on which to base its antitrust analysis?
 - Typically would obtain from the parties pursuant to a *second request* under the HSR Act
 - But also has the power to issue *civil investigative demands* (CIDs)
 - Essentially precomplaint subpoenas
 - Can include document requests, narrative interrogatories, and data interrogatories
 - Is not quite compulsory process (i.e., not *self-executing*)
 - DOJ must first obtain a court order compelling compliance
 - May be issued any time during the course of an investigation
 - May be issued to both the merging parties and to third parties
 - Often ask for the same documents and data as a second request
 - Multiple CIDs may be issued in the course of an investigation to the same person

What were the possible investigation outcomes?



What happened here?

- The DOJ: Challenged transaction—
 1. Decided that TransDigm's acquisition of SCHROTH violated Section 7 of the Clayton Act, *and*
 2. Filed a complaint in federal district court seeking a permanent injunction requiring TransDigm to divest the business and assets it had acquired from Takata
- TransDigm: Settled with a consent decree
 - That is, TransDigm agreed to give the DOJ judicially-enforceable relief that was sufficient to negate the DOJ's competitive concerns

The DOJ Complaint

When was the complaint filed?

- December 21, 2017

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA
Department of Justice, Antitrust Division
450 5th Street, N.W., Suite 8700
Washington, D.C. 20530,

Plaintiff,

v.

TRANSDIGM GROUP INCORPORATED
1301 East 9th Street, Suite 3000
Cleveland, Ohio 44114,

Defendant.

Civil Action No.:

COMPLAINT

The United States of America, acting under the direction of the Attorney General of the United States, brings this civil antitrust action for equitable relief against defendant TransDigm Group Incorporated (“TransDigm”) to remedy the harm to competition caused by TransDigm’s acquisition of SCHROTH Safety Products GmbH and substantially all the assets of Takata Protection Systems, Inc. from Takata Corporation (“Takata”). The United States alleges as follows:

I. NATURE OF THE ACTION

1. In February 2017, TransDigm acquired SCHROTH Safety Products GmbH and substantially all the assets of Takata Protection Systems, Inc. (collectively, “SCHROTH”) from Takata. TransDigm’s AmSafe, Inc. (“AmSafe”) subsidiary is the world’s dominant supplier of restraint systems used on commercial airplanes. Prior to the acquisition, SCHROTH was

The forum

- In what court was the complaint filed?
 - United States District Court for the District of Columbia (DDC)
- Why in DDC?
 - District court had—
 - *Personal jurisdiction* over the parties, *and*
 - Was a proper *venue* for the action
 - Historically, the DDC has been the most desirable forum for litigation from the DOJ's perspective
 - They know the judges
 - As a bench, the judges are experienced and sophisticated in the application of the merger antitrust laws—and frequently found in favor of the DOJ
 - Prosecutors do not have the hassle of moving out of town in the event of a trial

The defendant

- Who was the defendant in the case?
 - TransDigm
- Why wasn't Takata named as a defendant?
 - Why would it be?
 - Not necessary given the nature of the relief the DOJ was seeking (divestiture of acquired business)
 - Takata would have been a necessary party only if the DOJ was seeking recession (unwinding) of the transaction

Other possible plaintiffs

- Who else could have brought a Section 7 challenge against the transaction?
 1. Federal Trade Commission
 2. State AGs
 3. Customers
 4. Competitors
 5. Suppliers (in some circumstances)
- Some observations
 - States and private parties may also sue under state law if a state statute so provides
 - Treble damages are available only for injuries actually sustained
 - Can occur only after the transaction has been consummated
 - Damages cannot be obtained in connection with transactions that have not closed

Section 7 violation: Essential elements

- What are the elements of a Section 7 violation?
 1. An acquisition of stock or assets
 - Includes mergers under state law
 2. Where, in a relevant market
 - Product dimension
 - Geographic dimension
 3. The effect “may be substantially to lessen competition or tend to create a monopoly”
 4. Also need Commerce Clause jurisdiction

Element 1: An “Acquisition”

- Was there an acquisition here?
 - Yes. TransDigm Group acquired—
 - *Stock* of SCHROTH Safety Products GmbH, *and*
 - *Assets* of Takata Protection Systems, Inc.
- from Takata Corporation

Element 2: Relevant markets

- What was the relevant geographic market alleged in the complaint?
 - Worldwide (Compl. ¶ 22)

Element 2: Relevant markets

- What were the relevant product markets alleged in the complaint?
 1. Two-point lapbelts used on commercial airplanes



2. Three-point shoulder belts used on commercial airplanes



Element 2: Relevant markets

- What were the relevant product markets alleged in the complaint?

3. Technical restraints used on commercial airplanes



4. Inflatable restraint systems used on commercial airplanes (uses airbag technology)



Element 3: Anticompetitive Effect

- What were the anticompetitive effects of the acquisition alleged in the complaint?
 1. Increased prices
 - Prior to the acquisition, customers could and did “play off” the companies against each other to obtain better prices (Compl. ¶ 32)
 - Postmerger, the next closest competitor will not be as price-competitive with the combined firm as SCHROTH was to AmSafe
 2. Reduced innovation
 - Companies also competed against each other through R&D to develop new and better products (Compl. ¶ 32)
 - Could save significant money by curtailing R&D activities postmerger
 3. Significantly increased market concentration
 - Combined the only two significant players in the markets (Compl. ¶ 31)
 - Not really an anticompetitive effect under the prevailing consumer welfare interpretation
 - But the Supreme Court in the 1950s-1960s regarded it as the primary anticompetitive effect—included because of that precedent

Element 3: Anticompetitive Effect

- What were the factual allegations in support of an anticompetitive effect in each market?

1. Two-point lapbelts used on commercial airlines



- Only three meaningful competitors premerger (Compl. ¶ 24)
 - AmSafe was by far the largest
 - Small, privately held firm that had been in the market for years but had gained little share
 - SCHROTH, which entered the market with a new, innovative lightweight two-point lapbelt (“Airlite”), which it aggressively marketed to the major international airlines
- *Competitive effects implication:*
 - When three competitors are reduced to two, the remaining competitors are more likely to engage in oligopolistic coordination, which would result in a higher equilibrium market price and reduced rates of innovation

Element 3: Anticompetitive Effect

- What were the factual allegations in support of an anticompetitive effect in each market?

2. Three-point shoulder belts used on commercial airlines



- Factual allegations
 - ❑ Only two meaningful competitors premerger (Compl. ¶ 26)
 - ❑ AmSafe was by far the largest
 - ❑ “SCHROTH was aggressively seeking to grow its business at AmSafe’s expense”
 - ❑ Probably means that SCHROTH had not achieved any significant sales yet, but that efforts to penetrate the market caused AmSafe to reduce prices
- *Competitive effects implications*: “Merger to monopoly,” resulting in higher prices

Element 3: Anticompetitive Effect

- What were the factual allegations in support of an anticompetitive effect in each market?
 3. Technical restraints used on commercial airlines



- Only three significant suppliers premerger (Compl. ¶ 28)
 - ❑ AmSafe (“leading supplier”)
 - ❑ SCHROTH (“aggressively seeking to grow”)
 - ❑ (Unnamed) international aerospace equipment manufacturer
- *Competitive effects implications:*
 - ❑ “3-to-2 merger,” resulting in higher equilibrium market prices

Element 3: Anticompetitive Effect

- What were the factual allegations in support of an anticompetitive effect in each market?
 4. Inflatable restraint systems used on commercial airplanes



- Only two meaningful competitors premerger (Compl. ¶ 30)
 - ❑ AmSafe (which developed technology—offers both inflatable lapbelts and structural mounted airbags)
 - ❑ SCHROTH (offers only structural mounted airbags)
 - ❑ “In recent years, SCHROTH had emerged as a strong competitor to AmSafe in the development of inflatable restraint technologies”
 - Sounds very weak to me
 - May be some innovation competition (but maybe not that much)

Element 4: Effect on Interstate Commerce

- What were the factual allegations in support of an effect on interstate commerce?
 - “TransDigm sells restraint systems used on commercial airplanes throughout the United States. It is engaged in the regular, continuous, and substantial flow of interstate commerce, and its activities in the development, manufacture, and sale of restraint systems used on commercial airplanes have had a substantial effect upon interstate commerce.” (Compl. ¶ 9)

Defenses to the prima facie case

- How, if at all, could TransDigm defend against the DOJ's prima facie case?
 - First, an important distinction: Negative/affirmative defenses
 - *Negative defense*: Negates an element of the prima facie case
 - Defendant: "My conduct will not result in any anticompetitive harm"
 - *Affirmative defense*: Even assuming the plaintiff has established its prima facie case, the challenged conduct is nonetheless excused or justified
 - Defendant: "I did it, but my conduct is not culpable"
 - There are no affirmative defenses in antitrust law
 - Canonical forms of negative defenses in antitrust cases
 1. Rebut the factual predicates of the DOJ's prima facie case
 2. Multiple, significant competitors
 3. Ease of entry or positioning
 4. Countervailing bargaining power ("power buyers")
 5. Efficiencies

} Sometimes called *downward pricing pressure defenses*

Would any of these defenses likely work?

Relief

- What relief was the DOJ seeking?
 - Civil injunctive relief (see IX. Request for Relief)—
 - Declaration that TransDigm's acquisition of SCHROTH violated Section 7
 - Injunction ordering TransDigm to—
 1. divest all assets acquired from Takata Corporation in the challenged transaction, *and*
 2. take any further actions necessary to restore the market to the competitive position that existed prior to the acquisition
- Could the DOJ have sought other types of relief?
 - Criminal sanctions but only if challenged under Sherman Act § 1
 - Treble damages on behalf of injured U.S. government agencies under Clayton Act § 4A

The Consent Decree

What was the consent settlement?

- TransDigm agreed to a consent decree to divest SCHROTH (including the Takata Protection assets) to a third-party divestiture buyer approved by the DOJ

What is a consent decree?

- A *consent decree* is a final judgment in a case entered by consent of the litigating parties rather than an adjudication of the merits
- Sanctions for breach
 - A consent decree is a *judicial order*
 - Enforceable through civil and criminal contempt sanctions

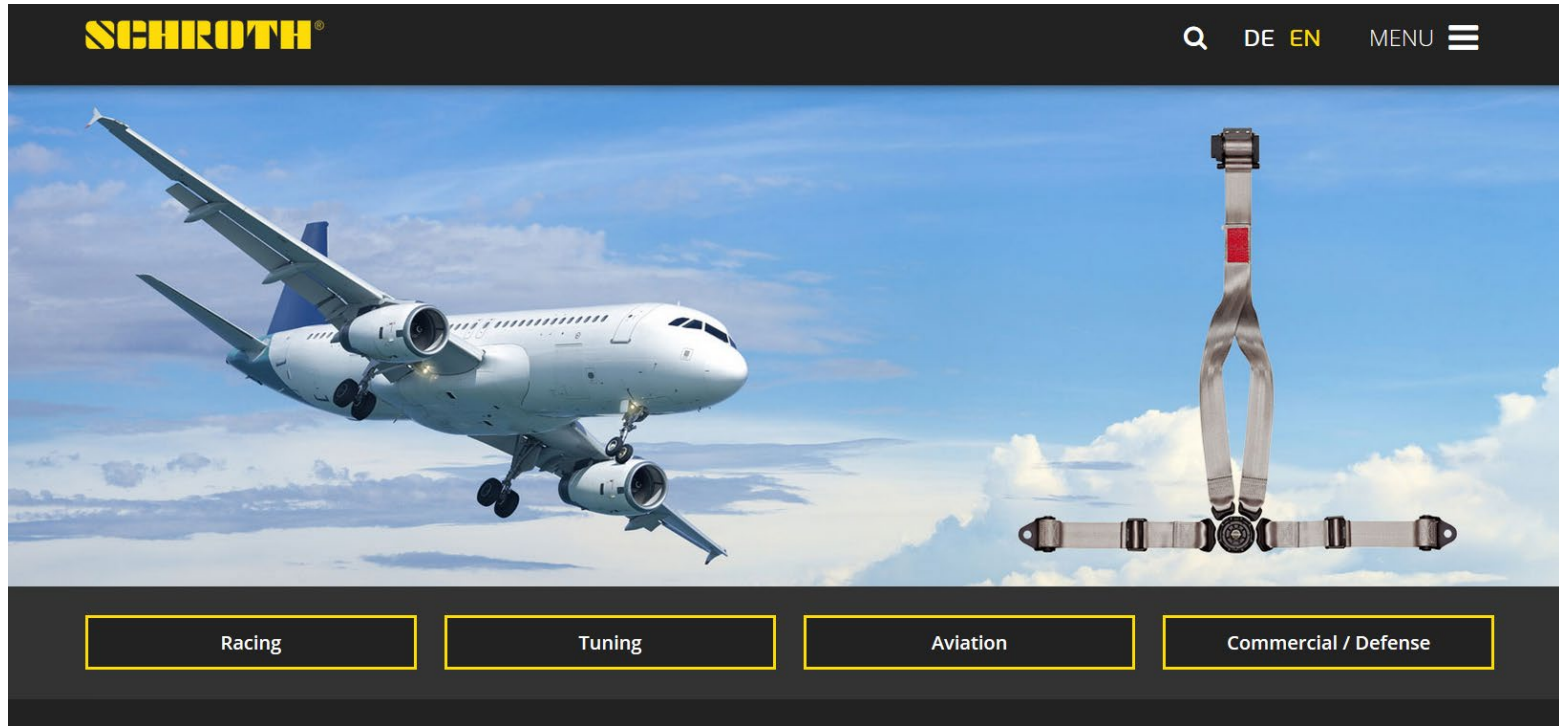
Business rationale

- Why did TransDigm agree to divest SCHROTH?
 - What were TransDigm's alternatives?
 1. Continue the litigation
 2. Settle with a consent decree acceptable to the DOJ
 - Why did TransDigm agree to settle?
 - Almost surely the least costly alternative
 - DOJ had a strong case: TransDigm was very likely to lose the litigation, and the DOJ would have obtained a litigated permanent injunction ordering the same divestiture
 - When did TransDigm agree to settle?
 - In the course of the investigation—Prior to litigation
 - Complaint and proposed consent decree were filed simultaneously with the court

The divestiture buyer

- To whom did TransDigm sell SCHROTH?
 - A management-led leveraged buyout (MBO)
 - Business unit's management + a private equity investor
 - Why sell to management?
 - The DOJ probably wanted a “buyer upfront”
 - An MBO was probably both—
 - The quickest solution, *and*
 - Offered the greatest return
 - Did the MBO get a good purchase price?
 - Probably
 - Consent decree solutions almost always involve a “fire sale” of the divestiture assets
 - TransDigm 10-K reported a \$32 million impairment charge to write down the assets to fair value. (p. 21)
 - TransDigm paid \$90 million to acquire SCHROTH
 - So it is likely the MBO paid only about \$58 million for the business
 - Actually, \$61.4 million (from TransDigm 8-K, Jan. 26, 2018, at 3.

SCHROTH today



- ❑ Approximately 250 employees
- ❑ Sales volume around \$50.2 million

Unit 2. Predicting Antitrust Enforcement Challenges

Professor Dale Collins
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Thinking Systematically about Antitrust Risk

The setup

- You are counsel to TransDigm
 - Prior to signing the purchase agreement, TransDigm's management seeks your advice on—
 1. Whether the antitrust authorities will investigate the transaction?
 2. Whether the DOJ or FTC will challenge the transaction on the merits?
 3. Whether the merging parties can successfully defend on the merits?
 4. If unsuccessful, what will be the consequences?

These are the fundamental questions every client asks at the beginning of a deal

These are questions about antitrust risk. How can we best explain to a client what is the antitrust risk in a deal?

Three types of antitrust risks

1. Inquiry risk

- The risk that legality of the transaction will be put in issue

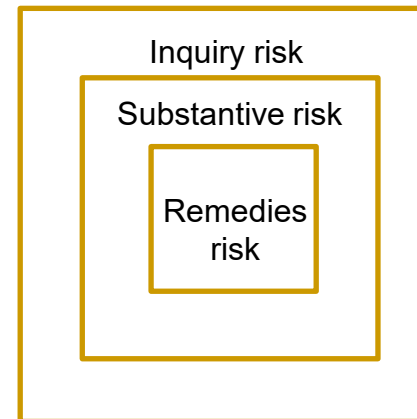
2. Substantive risk

- The risk that the transaction is anticompetitive and hence unlawful

3. Remedies risk

- The risk that the transaction will be blocked or restructured

Risks are nested



Assessing Substantive Risk

Focus first on substantive risk

- Inquiry risk comes first chronologically in a deal
 - Inquiry risk depends largely on—
 1. The *likelihood* that the challenger will prevail,
 2. The *reward* that the challenger will obtain from a successful challenge, *and*
 3. The *costs* to the challenger of raising the challengeall compared to doing nothing

In other words, inquiry risk depends on the expected value to the challenger of raising the antitrust question

- The first factor is a function of the substantive risk—so we need to study that first

Substantive risk

- Definition

- The risk of being unable to successfully defend the transaction on the merits

- Can be defined in relation to either—

- The outcome of a DOJ/FTC merger investigation, *or*
 - The outcome of litigation on the merits

Substantive risk: Costs

- There are costs associated with substantive risk incurred in defending a transaction regardless of the outcome—
 1. Delay/opportunity costs
 2. Expense of investigation/litigation and other out-of-pocket costs
 3. Management distraction costs
- But there is no reputational cost
 - Everyone views merger antitrust reviews as *regulatory*
 - *Not* as an indication that the merging parties may be breaking the law

Assessing probabilities of substantive risk

- Substantive risk depends on a *prediction* on whether the parties will be able to successfully defend their transaction on the merits

So how do we make that prediction?

First, an important distinction

■ Basic distinction #1

- *Decision making*: How the agencies **decide** a merger is anticompetitive
- *Explanation*: How the agencies **explain** why they believe that the merger is anticompetitive

■ Why is this distinction important?

- How the agencies (or the courts) explain their decisions often does not reveal *why* they decided on that particular outcome
- What you read in judicial opinions may only be the justification of an outcome that the judge reached for other (unexplained) reasons

A fundamental task in effective advocacy is recognizing this distinction and making your argument appeal simultaneously to the “heart” and “mind” of the decision-maker

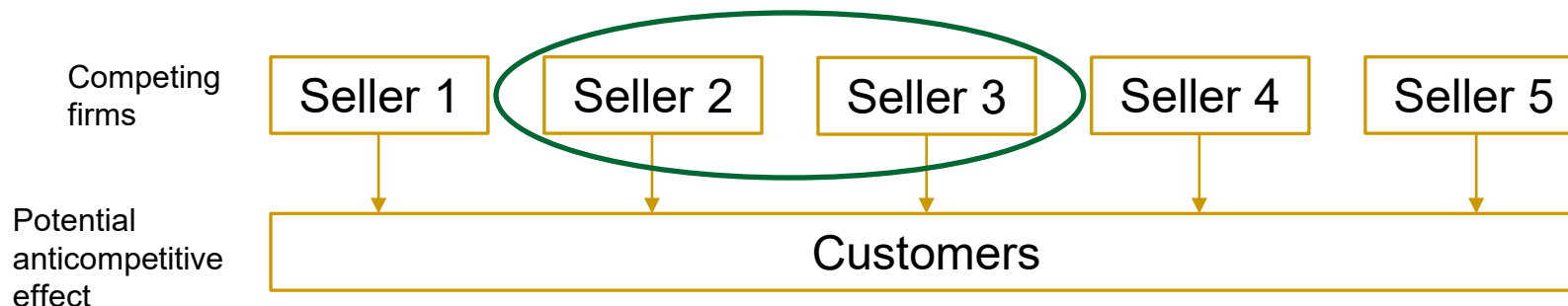
Overview: Theories of anticompetitive harm

- “Conventional” theories of anticompetitive harm
 1. Elimination of horizontal competition in output/downstream/seller markets
 2. Elimination of potential competition
 - a. Actual potential competition
 - b. Perceived potential competition (essentially a dormant theory)
 3. Vertical harm
 - a. Input foreclosure
 - b. Output foreclosure
 - c. Anticompetitive information conduit
- “New” theories of anticompetitive harm being tested
 1. Elimination of horizontal competition in input/upstream/buyer markets
 2. Dominant firm entrenchment
 - a. Elimination of nascent competition (an extension of actual potential competition)
 - b. Modern entrenchment

See the Appendix for a little more detail

Overview: Theories of anticompetitive harm

- The vast bulk of challenges involve the *elimination of horizontal competition in output/downstream/seller markets*



- In this example, Sellers 1 and 2 merge
 - Reduces the number of firms competing against each other in the sale of products from five to four (a “5-to-4 merger”)
- *Potential anticompetitive effect:* Will the decrease in the number of independent firms in the market reduce competition in the downstream market?

*The vast bulk of merger antitrust challenges invoke this theory.
This class—and most of the course—will focus on this theory.*

A predictive model for horizontal mergers

- We are going to look at a model that *predicts* merger antitrust outcomes for horizontal mergers in downstream markets
 - We will tweak the model as necessary to account for any DOJ or FTC challenges that depart from modern historical practice
- The model does *not purport to describe* how the investigating agency in fact decides merger outcomes
- The model's only purpose is to predict enforcement outcomes, not to describe the agency's decision-making process

Assessing substantive antitrust risk

- So how do the DOJ/FTC decide whether a merger is anticompetitive?
 - Recall that the purpose of merger antitrust law under the *consumer welfare standard* is to prevent harm to customers in the market through—
 - Increased prices
 - Reduced market output
 - Reduced product or service quality
 - Reduced rate of technological innovation or product improvement
 - [Maybe] reduced product variety

*Under the consumer welfare standard,
modern antitrust law looks to effects on customers**

* Under an “expanded” consumer welfare theory, antitrust law also looks at effects on suppliers (i.e., anticompetitive effects in upstream markets).

Assessing substantive antitrust risk

- The predictive model—Four important rules
 1. Absent compelling evidence of significant customer harm on other dimensions, only **price increases** count
 2. The merger is anticompetitive if it is likely to result in a price increase or other competitive harm to **any identifiable customer group**
 3. The agencies believe that **no customer group is too small** to deserve antitrust protection
 4. *Corollary*: No deal is too small not to be challenged

The predictive model for horizontal mergers

Reduction in Bidders/Competitors*

- 5 → 4 Usually clears if no bad documents and no material customer complaints
- 4 → 3 Usually challenged unless there are no bad documents and there is a strong procompetitive business rationale, some customer support, *and* minimal customer complaints
- 3 → 2 Almost always challenged unless there are no bad documents, and there is a compelling business rational that is strongly supported by customers and no material customer complaints
- 2 → 1 Always challenged

* Critically, these must be **meaningful** and **effective alternatives** from the perspective of the customer; “fringe” firms that customers do not regard as feasible alternatives do not count

Historical note: Up until 2015, 5 → 4 deals almost always cleared without any review and the chart would be compressed to begin at 4 → 3

Prediction: In the Biden administration, it is likely we will see an attempt to further tighten the standards to begin at 6 → 5 (with 3 → 2 always being challenged)

The predictive model for horizontal mergers

■ Special cases inviting challenge

1. Unilateral effects

- Two firms that compete very closely with one another but much less with other firms in the market
- Often occurs with premium brands (think BMW and Mercedes Benz in an automobile market)

2. Acquisition of a “maverick”

- Elimination by an established firm of a typically smaller competitor that has been especially disruptive in the marketplace to the benefit of consumers

3. Acquisition of an actual potential entrant

- In a highly concentrated market, the acquisition by or of a firm that otherwise likely would have entered the market in the near future and thereby increased competition

4. Acquisition of a “nascent competitor”

- The acquisition by an entrenched “superfirm” (think Facebook) of a firm that has technology that objectively might be used by the seller or a third party in the future to compete against the buyer, whether or not anyone has a present intention of competing with the acquiring firm with the technology (think Instagram and WhatsApp)—Challenges, but no judicial decisions

New theory

Basic structural tests for horizontal mergers

- The chances of successfully defending a deal *improve* if—
 - There are demonstrable powerful forces that constrain price increases or other anticompetitive behavior beyond the mere number of incumbent competitors
 - Three major forces:
 1. *Entry, repositioning, or output expansion* by third-party competitors in response to anticompetitive behavior by the combined company
 - Requires low barriers to entry or repositioning
 2. *Powerful customers*, who can use their bargaining leverage to stop the combined firm from acting anticompetitively
 - Requires a detailed explanation of how the bargaining will work to constrain the combined firm
 - Defense only works firm-by-firm—the merger can still harm small firms that do not have the requisite bargaining power to protect themselves
 3. *Efficiencies*, where the procompetitive pressure of the efficiencies outweighs the anticompetitive pressure of the increased market power
 - More on this below
 - Agencies are very skeptical about efficiencies

Basic structural tests for horizontal mergers

■ Defenses

- These forces are *legal defenses* if they are sufficient in likelihood and magnitude to completely offset the likely customer-harming aspects of the transaction
- Basic distinction #2
 - *Negative defense*: The merger is not anticompetitive in the first instance
 - *Affirmative defense*: Even if the merger is anticompetitive, it is nonetheless not unlawful
- Technically—
 - A *negative defense* denies an element of the plaintiff's prima facie case
 - An *affirmative defense*
 - accepts the elements of the prima facie case as true, *but*
 - raises matters outside of the prima facie case that provide a justification or an excuse to absolve the defendant from liability

There are no affirmative defenses in modern antitrust law

Another basic distinction

- Basic distinction #3: Truth v. evidence
 - The agencies (and the courts) deal in **evidence**
 - Having the **truth** but being unable to prove it will not win the day
 - The investigating staff also needs evidence to be able to make its case to the agency decision makers and, if necessary, in litigation

So what are the sources of evidence?

Major sources of evidence

1. Company documents submitted with the original HSR filing
2. Company responses to second requests in an HSR Act review
 - ❑ Ordinary course of business documents
 - ❑ Responses to data and narrative interrogatories
3. Interviews/testimony/public statements of merging firm representatives
4. Interviews with knowledgeable customers
5. Interviews with competitors
6. Customer responses in staff interviews and to DOJ Civil Investigative Demands (CIDs) or FTC precomplaint subpoenas
7. Analysis of bidding or “win-loss” data
 - ❑ Including the ability of customers to play the merging firms off one another
8. “Natural” experiments
9. Expert economic analysis

Synergies/Efficiencies

Synergies/efficiencies

■ Some definitions

- *Synergies* (a business term)
 - Benefits to the company from the transaction that lower the combined firms' costs or increase its revenues
- *Efficiencies* (an antitrust term)
 - The term used in antitrust analysis for synergies that benefit consumers

Synergies are relevant to the antitrust analysis only to the extent they are passed on or otherwise benefit to customers

Synergies

■ Types of synergies enabled by the deal

1. Customer value-enhancing efficiencies

- Making existing products better or cheaper
- Creating new products or product improvements better, cheaper, or faster

2. Cost-saving efficiencies

- Reductions in duplicative costs
- Increases in the productive efficiency of the combined operation (e.g., through best practices, transfer of more efficient production technology)

3. Anticompetitive synergies

- Eliminating competition on price, quality, service, or innovation and so increases profits (horizontal theory of anticompetitive harm)
- Creating an incentive and ability to withhold important/ essential products or services used by competitors and so eliminate competition and increase price (vertical theory of anticompetitive harm)

Efficiencies

- Efficiencies play two roles in an antitrust merger analysis
 1. They provide an explanation why the acquiring firm is pursuing the deal (and probably paying a significant premium) that does not depend on price increases to customers or other anticompetitive effects
 2. In close cases, efficiencies may tip the agencies into not challenging the deal
 - a. Where the efficiencies exist *inside* a problematic relevant market, efficiencies are a legal defense if efficiencies negate the anticompetitive effects that otherwise would likely occur
 - b. Where the efficiencies exist *outside* of the problematic relevant market, efficiencies are not a legal defense but can appeal to prosecutorial discretion

Efficiencies

- To be credited by the investigating agency, synergies must be:
 1. Merger-specific
 - That is, they could not be obtained in the absence of the merger
 2. Verifiable by sufficient evidence
 3. Would completely and immediately be sufficient to offset any anticompetitive tendencies of the merger
 4. Not the result of an anticompetitive effect of the transaction
- Agency view
 - *Obama*: Efficiencies have been given very little weight as a legal defense since the middle of the Obama administration
 - *Trump*: Surprisingly, the same perspective continued during the Trump administration
 - *Biden*: Skepticism almost surely will continue—perhaps with even more hostility—in the Biden administration

Homework Assignment for Class 3

The problem

The general counsel of TransDigm has asked you to begin a merger antitrust analysis of an acquisition by TransDigm of SCHROTH from Takata. The GC wants to start with a “quick and dirty” view of the problems that might arise in the United States. To this end, the GC will try to find the answers within the company to up to six questions. What six questions would you like to ask?

Instructor's answer

1. Business rationale

- ❑ What is TransDigm's business rationale for making the acquisition (i.e., how will TransDigm make money by acquiring SCHROTH)?

2. Customer benefits

- ❑ How, if at all, will customers benefit from the transaction?

3. Complaints

- ❑ Who, if anyone, is likely to complain about the transaction and, if so, what will they say? (Especially interested in customer reactions)

4. Power to harm customers

- ❑ If someone (say a sophisticated customer) was hostile to the deal, how would it argue that the merger will give TransDigm the ability and incentive to raise prices, reduce product or service quality, reduce investment in innovation or product improvement, or cut off supplies to competitors?

Instructor's answer

5. Competitive overlaps

- ❑ In what product lines do TransDigm and SCHROTH compete against each other in the United States?

6. Other competitors

- ❑ In each overlapping product line, are there significant other competitors to whom customers can turn to protect themselves in the event that TransDigm increases its price, reduces its product or service quality, or reduces investment in innovation or product improvement following the acquisition?

Questions from homework submissions

1. What are the relevant markets that will be affected by this acquisition?
2. How would you define the market (products/services and geography) for your products?
3. Will this acquisition substantially decrease competition in the relevant markets?
4. How big a player is TransDigm within the market?
5. For each product TransDigm produces, please provide the names of all competitors and their respective market shares.

Questions from homework submissions

6. Will consumers be harmed by this acquisition by an increase in prices?
7. Do customers “play off” TransDigm and SCHROTH against each other to get better prices?
8. What would TransDigm’s new market share in an already highly concentrated market be after the acquisition?
9. Would the acquisition decrease innovation of future technologies, or would TransDigm remain motivated to innovate?

Questions from homework submissions

10. Will consumers benefit from or be harmed by differences in product quality after the acquisition?
11. Has TransDigm received any customer complaints about the transaction?
12. What documents do the merging parties have that might reveal the intent of the transaction?
13. Does TransDigm have any documents, or has it made any public statements, suggesting that postmerger it will raise prices, reduce production, or decrease R&D investment?

Practice pointer #1

■ Attorney-client privilege applies to these communications

□ Core elements—

1. a communication (including a written communication)
2. between a client and its attorney or their respective agents
3. made in confidence
4. for the purpose of obtaining *or* providing legal advice for the client

Know these elements! The party asserting the privilege bears the burden of proof and will be required to establish each element on a privilege log when withholding a document on privilege grounds

□ Protects communications, *not* the underlying facts

□ The attorney-client privilege can be waived—

1. Explicit or intentional waiver
2. Implied waiver (usually through disclosure to a third party)
3. “At-issue” waiver
4. The crime-fraud exception

Practice pointer #2

■ The work product doctrine may also apply

1. *Hickman v. Taylor* (ordinary) work product

- The ordinary work product doctrine provides a qualified privilege from discovery of—
 - Documents or other tangible things
 - Prepared in anticipation of litigation
 - By or for a party or a party's representative¹
- Commonly extended to information sought through depositions and interrogatories (i.e., protects communications)
- Can be pierced when the party seeking discovery shows that it—
 - Has substantial need for the materials to prepare its case, and
 - Cannot, without undue hardship, obtain their substantial equivalent by other means²

2. Attorney opinion work product

- Applies to the “mental impressions, conclusions, opinions, or legal theories of a party’s attorney or other representative concerning the litigation”³
- Absolutely protected—cannot be pierced by a showing of need

¹ See Fed. R. Civ. P. 26(b)(3)(A).

² *Id.*

³ *Id.* 26(b)(3)(B).

Bonus Class Exercise

(time permitting)

It is September 2016. Nicholas Howley, the CEO of TransDigm, is considering making an acquisition of the SCHROTH commercial airlines safety restraint business. He is asking you for a preliminary antitrust risk analysis of this deal. You know no facts, but Mr. Howley is happy to answer your questions at the meeting. He is also skeptical that the deal presents any material antitrust risk.

Before the meeting: Learn what you can

1. Look at the websites of both companies
 - Learn about their businesses
 - Try to determine whether there are any product overlaps
2. Search the Internet and newspaper archives using “TransDigm and SCHROTH” as the search request

Assume that you find from this research that—

- *The deal involves a horizontal overlap in safety restraints for commercial airlines*
- *TransDigm is the dominant firm in the business*
- *SCHROTH is a new entrant with a small share*
- *There are few if any other firms in the business*

But no other meaningful information

Goals of the meeting

1. *Teach* the client the operational test for Section 7 illegality
2. *Ask* the client the most important factual questions
3. *Communicate* your view of the antitrust risk in a way that the client understands
4. *Provide* any strategic advice as to how the client might minimize antitrust risk

We will go through each goal in detail

Teach the client the operational test

- Important to start with the operational test
 1. Unless the client understands the test, they will not be persuaded by your advice
 - The client will not be persuaded unless they can replicate your analysis and reproduce your conclusion
 2. If the client understands the test, they are more likely to give complete and meaningful answers your factual questions
 3. If the client knows the test, they can continue to think after they leave the meeting about what other facts may be relevant and follow up with you to sharpen the risk analysis
 4. The client *needs* to know the operational test as they move forward with the transaction

Teach the client the operational test

- Important to start with the operational test

Start prepping the client with the first meeting so that they can understand the antitrust implications of—

- *What they write in their documents*
- *What they say to the press and to customers*
- *What they say in meetings with the investigating agency*

Teach the client the operational test

- Start with Clayton Act § 7
 - Governing merger antitrust statute
 - Other statutes may apply, but they will not be more restrictive than Section 7
 - Section 7 prohibits transactions that “may substantially lessen competition”
- But what does this mean *operationally*?
 - A transaction “may substantially lessen competition” when it is likely to harm an identifiable group of customers by—
 1. Increasing prices
 2. Reducing market output
 3. Reducing product or service quality
 4. Reducing the rate of technological innovation or product improvement
 5. [Maybe] reducing product variety

Clients can grasp the operational test immediately

Teach the client the operational test

- Tell the client how the investigating agency is going to find the facts about the likely competitive effect
 - HSR reportability and merger review process
 - Time to ask questions to find out if the deal is likely to be reportable
 - The investigating agency will—
 1. Entertain a presentation from the parties on the deal
 2. Interview—and perhaps later depose under oath—you and other relevant employees in both companies
 3. Obtain massive amounts of the documents and data from both companies
 4. Interview customers and competitors (and maybe obtain documents and data from them)
 5. Analyze win-loss records of the companies in bidding for projects
 6. Use economists to assist in analyzing the likely competitive effects of the transaction

Teach the client the operational test

■ Bottom line

- The agency's conclusion on the likely effect on customers will determine the outcome of the investigation
 - NB: It is the *agency's conclusion*, not necessarily the truth, that counts
- The best defense is a good offense
 - Can we argue that the deal is a “win-win” for the merging parties *and* the customers?
 - Companies do not do deals out of the goodness of their heart—*they do deals to make money*
 - Do we have a story consistent with the business model for the transaction, the documents and other company evidence, and the likely customer responses in staff interviews that the deal will be good for customers?

Best story: *The transaction will enable the combined company to make money by reducing costs and by making better products faster to the benefit of our shareholders and our customers*

Ask the client questions

1. What is the deal rationale?
 - ❑ How will TransDigm make money from the transaction?
 - ❑ Are there any documents on the business rationale?
 - If so, what do they say? Do they support the business rationale? Or refute it?
 - ❑ What are the implications of the business model for customers?
2. What will the company documents say about competition between the two companies?
3. Who are the customers and what will they say to the agency when interviewed?
4. Do we have a sales pitch that we can give the customers that the deal will be good for them?
 - ❑ Will they accept it?

Communicate the antitrust risk

- *Answer the client's question:* Based on what you learned in the meeting, what is the antitrust risk presented by the deal?
 - It is not sufficient for you to form a view as to the antitrust risk
 - You must meaningfully communicate the nature of this risk to the client so that the client can make informed business decisions
 - If the client does not understand your advice, they cannot act on it
 - If the client is not persuaded that your advice is correct, they will not act on it
- Best explained in terms of—
 - Substantive risk
 - Inquiry risk
 - Remedies risk

So what would you tell Mr. Howley about each of these risks in a TransDigm/SCHROTH deal?

Provide any strategic advice

1. Emphasize the need for a compelling sales pitch for the deal to customers of *both* companies
 - Offer to help the relevant business people develop this pitch and advise on when and how to roll it out
 - Note that it is the customers of the target company that are typically the most difficult to persuade
 - Will eventually need to work with the target company as to how best to persuade its customers
2. Emphasize the need for care in drafting documents
 - “Bad” documents alone can kill a deal
 - Avoid creating documents that suggest—implicitly as well as explicitly—that the deal could harm customers
 - Some documents are “bad” because they were carelessly phrased or factually incorrect, not because they speak the truth—These can also kill a deal
 - If there is one, include the procompetitive business rationale for the deal in as many documents as possible

Provide any strategic advice

3. Consider whether the deal can be structured to make it non-HSR reportable to minimize inquiry risk

Final thoughts

1. Caution the client that this advice is only preliminary and depends on what the client has told you in the meeting
2. Note that more work should be done
 - ❑ Would like to send the client a *preliminary information request* for easily obtainable documents and data
 - ❑ When confidentiality considerations permit, would like to set up a *meeting with knowledgeable employees* to develop the facts and the arguments further
3. Tell the client that all documents created at the request of counsel should have the following prominent legend:

PRIVILEGED AND CONFIDENTIAL
Prepared at the request of counsel

 - ❑ Whenever possible, make this legend *machine readable*

Do NOT forget this!!!

Final thoughts

4. Note that at some point in the process we will need to bring the target company onboard
 - The target's evidence and customer outreach program will be equally if not more critical to the outcome of any merger review
 - Note that we should be able to work with the target company under the "common interest" privilege
5. The target, unless incompetently advised, is likely to recognize the antitrust risk in the transaction
 - Should expect that the target will attempt to negotiate some provisions in the purchase agreement to—
 - Decrease the risk of a deal failure, *and*
 - Compensate the target for risk that cannot be eliminated

Appendix

Overview: Theories of anticompetitive harm

- “Conventional” theories of anticompetitive harm
 1. Elimination of horizontal competition in output/downstream/seller markets
 - ❑ Where competing sellers merge to the harm of customers
 - ❑ The vast bulk of merger antitrust challenges invoke this theory
 2. Elimination of potential competition
 - a. Actual potential competition:
 - ❑ Where the merger involves one of the few firms (the actual potential entrant) that likely would have entered the market in the near future but for the merger and whose entry would have substantially increased competition in the market
 - ❑ The idea is that, on a going-forward basis, the market would be more competitive without the merger than with it
 - b. Perceived potential competition (essentially a dormant theory)
 - ❑ Where the merger involves one of a few firms (the perceived potential entrant) that incumbent firms in the market perceive is on the verge of entering the market and whose presence causes the incumbent firms in the market to act more competitively than they would in the absence of the perceived potential entrant

Overview: Theories of anticompetitive harm

■ “Conventional” theories of anticompetitive harm

3. Vertical harm

a. Input foreclosure

- Where the merger involves a firm and a supplier, and postmerger the combined firm can competitively disadvantage its downstream rivals by refusing to sell (foreclose) them supplies or raising their supply prices¹

b. Output foreclosure

- Where the merger involves a firm and a customer/distributor, and postmerger the combined firm can competitively disadvantage its upstream rivals by refusing to buy or distribute their products or paying less than competitive prices

c. Anticompetitive information conduits

- Where the merger involves a firm (usually a downstream firm) that deals with the other merging firm’s rivals and obtains sensitive information from them that postmerger the combined firm can use to competitively disadvantage those rivals and reduce competition in the market

Overview: Theories of anticompetitive harm

- “New” theories of anticompetitive harm being tested
 1. Elimination of horizontal competition in input/upstream/buyer markets
 - Where competing buyers merge to the harm of suppliers (including labor)
 - Invoked on occasion in the past (usually in agricultural markets)
 - A major focus for the Biden administration (especially for anticompetitive effects in labor markets)
 - *Test case*: United States v. Bertelsmann SE & Co. KGaA, No. 1:21-cv-02886 (D.D.C. filed Nov. 2, 2021)
 - Alleges a merger between two major book publishers violates Section 7 because it is likely to reduce the advances paid to authors
 - Tried in August 2022—decision expected in the fall

Overview: Theories of anticompetitive harm

■ “New” theories of anticompetitive harm being tested

2. Dominant firm entrenchment

a. Elimination of nascent competition

- ❑ Entrenched dominant firms should not be allowed to acquire firms or assets that, absent the acquisition, could potentially be used by the seller or a third party to undermine the entrenched firm’s dominant position
 - Usually involves the acquisition of a new product or a new technology
 - The idea: An entrenched dominant firm should be prohibited from acquiring any firms or assets with the potential—even if the probability is low—of undermining the firm’s dominant position
- ❑ Introduced in the Trump administration
- ❑ *Test cases*:
 - FTC v. Facebook, Inc., No. CV 20-3590 (JEB) (D.D.C. filed Dec. 9, 2020) (challenging Facebook’s acquisitions of WhatsApp and Instagram) (trial to be held in 2024)
 - United States v. Visa, No. 3:20-cv-07810 (N.D. Cal. filed Nov. 5, 2020) (challenging Visa’s proposed acquisition of Plaid Inc.) (transaction abandoned)

Overview: Theories of anticompetitive harm

■ “New” theories of anticompetitive harm being tested

2. Dominant firm entrenchment

b. Modern entrenchment

- ❑ Entrenched dominant firms should not be allowed to acquire firms or assets that could further entrench them
- ❑ *Test case*: FTC v. Meta Platforms, Inc., No. 3:22-cv-04325 (N.D. Cal. filed July 27, 2022)
 - Alleges Meta's proposed acquisition of privately-owned Within Limited, Inc. violates Section 7 in the relevant market for VR dedicated fitness apps and the broader market for VR fitness apps.
 - Theory of harm: If Meta is allowed to acquire Within's popular VR fitness app, the acquisition would further entrench Meta in the VR space; if the acquisition is blocked, Meta will develop its own VR fitness app even though it has no current plans to do so.
 - Trial is scheduled to begin on December 8, 2022

Unit 3: A Brief History of Antitrust Law

(with special attention to merger antitrust law)

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

A Brief History of Antitrust Law



Source: New York Globe, 1907

The Common Law Approach to Antitrust Law

At the creation

- The Sherman Act adopted a “common law approach” to antitrust law
 - There was a clear recognition that Congress could not write detailed, prescriptive legislation
 - From the beginning, the Sherman bill sought to deal with the trusts through the common law or, more precisely, a common law approach

[S.1, the Sherman antitrust bill,] does not announce a new principle of law, but applies old and well recognized principles of common law to the complicated jurisdiction of our State and Federal Government. Similar contracts in any State in the Union are now, by common law or statute law, null and void. . . .

. . . The purpose of this bill is to enable the courts of the United States to apply the same remedies against combinations which injuriously affect the interest of the United States that have been applied in the several States to protect local interests.

Sen. John Sherman¹

¹ 21 Cong. Rec. 2455 (Mar. 21, 1890) (remarks of Sen. John Sherman (R. Ohio)). For similar sentiments that the various iterations of the antitrust bill were all to enable the courts to apply the common law regarding business enterprises, see 20 Cong. Rec. 1167 (Jan. 25, 1889) (Sherman); 21 Cong. Rec. 2456, 2457, 2459 (Mar. 21, 1890) (Sherman); 21 Cong. Rec. 2729 (Mar. 27, 1890) (remarks of Sen. George F. Hoar (R., Mass)); 21 Cong. Rec. 3149 (Apr. 8, 1890) (statement of Sen. Morgan);); 21 Cong. Rec. 3152 (Apr. 8, 1890) (Hoar).

At the creation

- The Sherman Act has been criticized for employing vague, uninformative terms
- But this is a defining feature of antitrust law, *not* a bug
 - This is an intentional part of the design of U.S. antitrust law from the beginning¹
 - The Sherman Act incorporated common law terms of art to provide a well-known body of law and precedent that enforcement officials and courts could immediately apply—
 - “Restraint of trade”
 - “Monopolization”
 - “Attempt to monopolize”
 - “Conspiracy to monopolize”
 - The common law also permitted courts to refine and modify the law with new learning and as new business practices emerged without the need for congressional action

¹ See William F. Baxter, *Separation of Powers, Prosecutorial Discretion, and the "Common Law" Nature of Antitrust Law*, 60 Tex. L. Rev. 661 (1982).

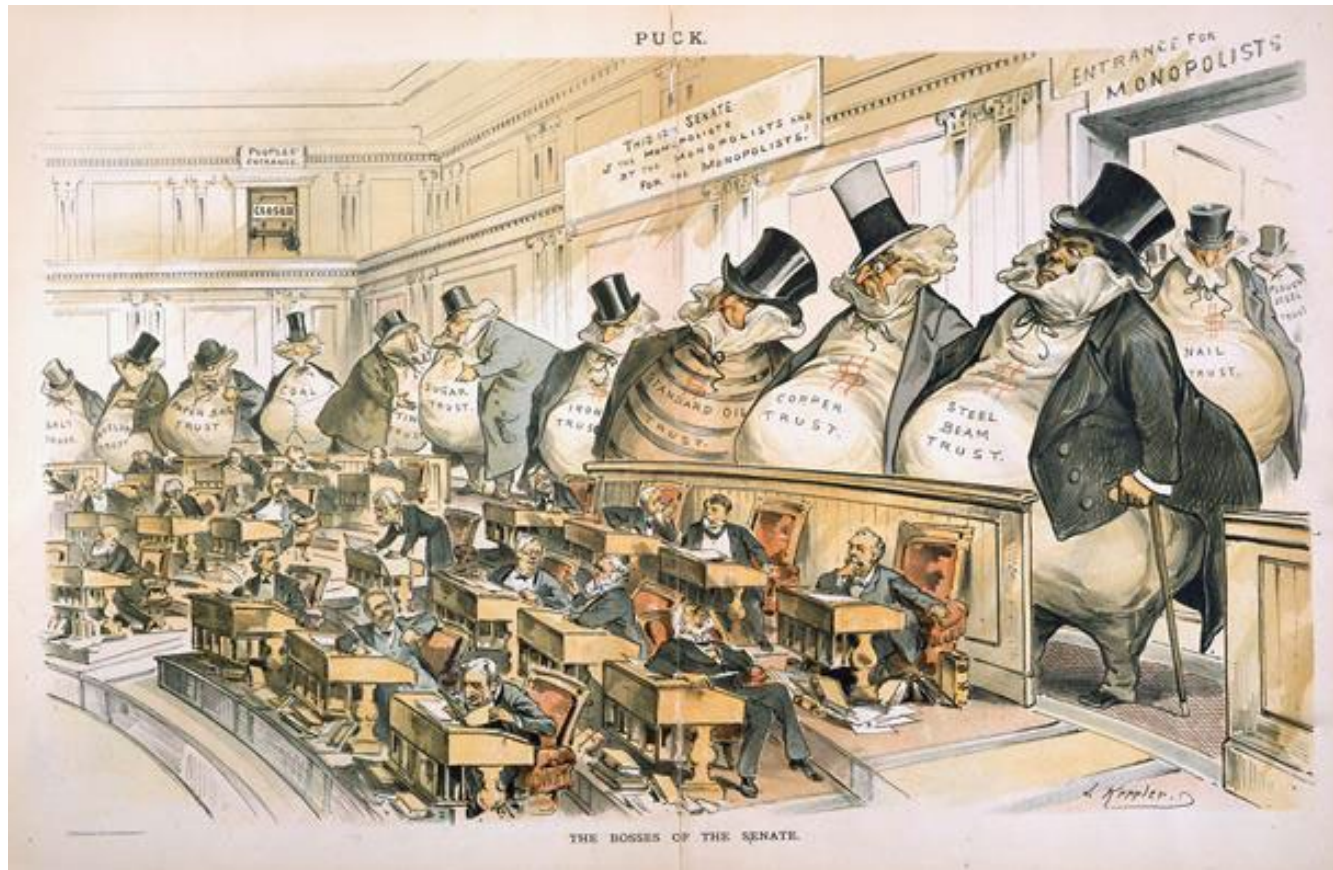
At the creation

■ Historical aside

- Sen. John Sherman (R., Ohio) introduced his antitrust bill on August 14, 1888, in the 50th Congress
 - One of several antitrust bills introduced by various members of Congress
 - *Query*: Why would Sherman—one of the most powerful members of the Senate and a very serious candidate for the Republican Party's nomination for president in 1880, 1884, and 1888—introduced an *antitrust* bill?
 - After all, the Republicans controlled the Senate, House, and Presidency
 - AND the trusts were sid to control the Republicans

At the creation

- Historical aside



Joseph Keppler, *The Bosses of the Senate*, Puck, Jan. 23, 1889

At the creation

■ Historical aside

- Sherman reintroduced his bill as S.1 on December 4, 1889, in the 51st Congress
 - Vigorous Senate floor debate on the six days between January 23 and February 4, 1890
 - Numerous amendments were offered, many of which were adopted
 - Referred to the Senate Judiciary Committee on March 27, 1890
- Senate Judiciary Committee reports S.1 six days later as amended in the form of a substitute on April 2, 1890
 - Nothing in the amended bill contained Sherman's language—it was an entirely new bill
 - BUT retained the idea that the antitrust statute should be an enabling act to empower the federal courts to use a common approach to antitrust law
 - Defined offenses using terms of common law art

At the creation

■ Historical aside

□ Enactment

- April 8, 1890: Senate Judiciary Committee bill with amendments passed Senate 52-1 and sent to the House
- May 1-2, 1890: House debates, amends, and passes S.1 in an unrecorded vote
Conference Committee: House eventually recedes from its amendments to S.1
- June 20, 1890: House debates and passes S.1 without amendments (242-0)
- July 2, 1890: President Benjamin Harrison signs S.1 into law

Political value judgment

- How to operationalize the common law terms in antitrust law is a political value judgment
 - Determined by the courts in the absence of congressional direction
 - In the 130-year history of antitrust law, Congress has intervened in the common law process to change the law or the direction of the courts only four times:
 - 1912: The Clayton and Federal Trade Commission Acts¹
 - 1936: The Robinson-Patman Act²
 - 1937: The Miller-Tydings Act and its subsequent repeal³
 - 1950: The Celler-Kefauver Act⁴
- Current prospects for legislative reform
 - We are as close today as we have been in 70 years to seeing Congress amend the substantive prohibitions of the antitrust laws (and in very significant ways)
 - While perhaps some legislation will be enacted narrowly targeted to the dominant high tech firms, efforts for a general overall of the antitrust laws appear to be dead

¹ Clayton Act, ch. 323, 38 Stat. 730 (1914) (current version at 15 U.S.C. §§ 12 to 27); Federal Trade Commission Act, ch. 311, 38 Stat. 717 (1914) (current version at 15 U.S.C. §§ 41-58).

² Ch. 592, § 1, 49 Stat. 1526 (1936) (current version at 15 U.S.C. §§ 13-13a).

³ Ch. 690, 50 Stat. 693 (1937), repealed Pub. L. 94-145, 89 Stat. 801 (1975).

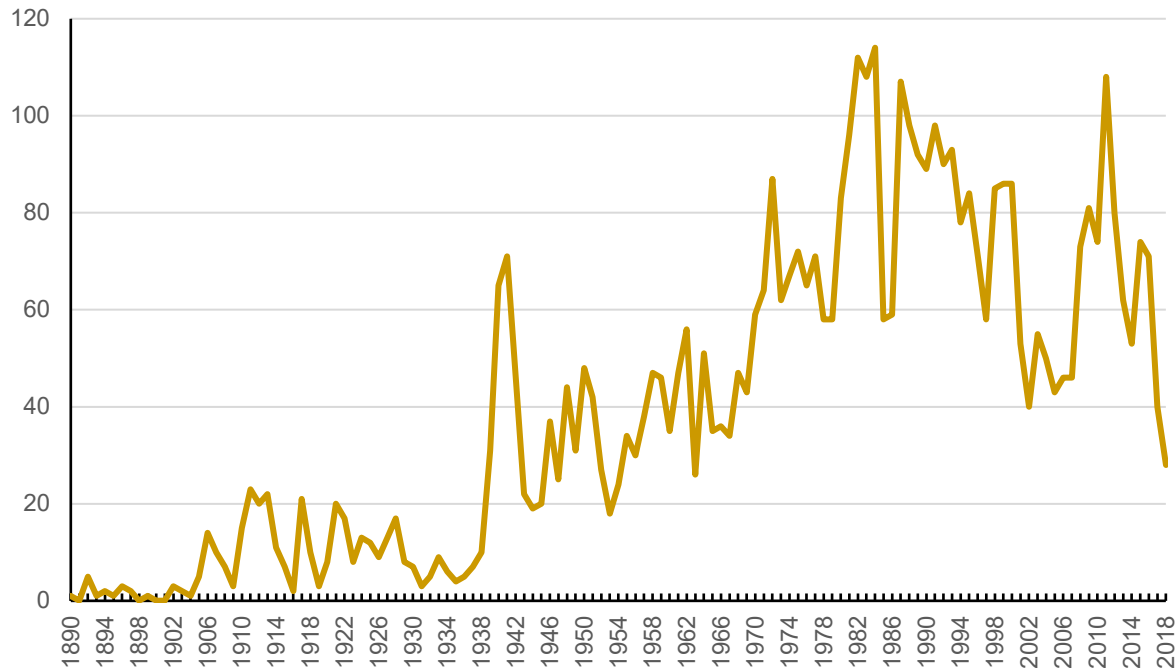
⁴ Ch. 1184, 64 Stat. 1125 (1950) (current version at 15 U.S.C. § 18 (1976)).

The Evolution of Antitrust Law

Antitrust law over time

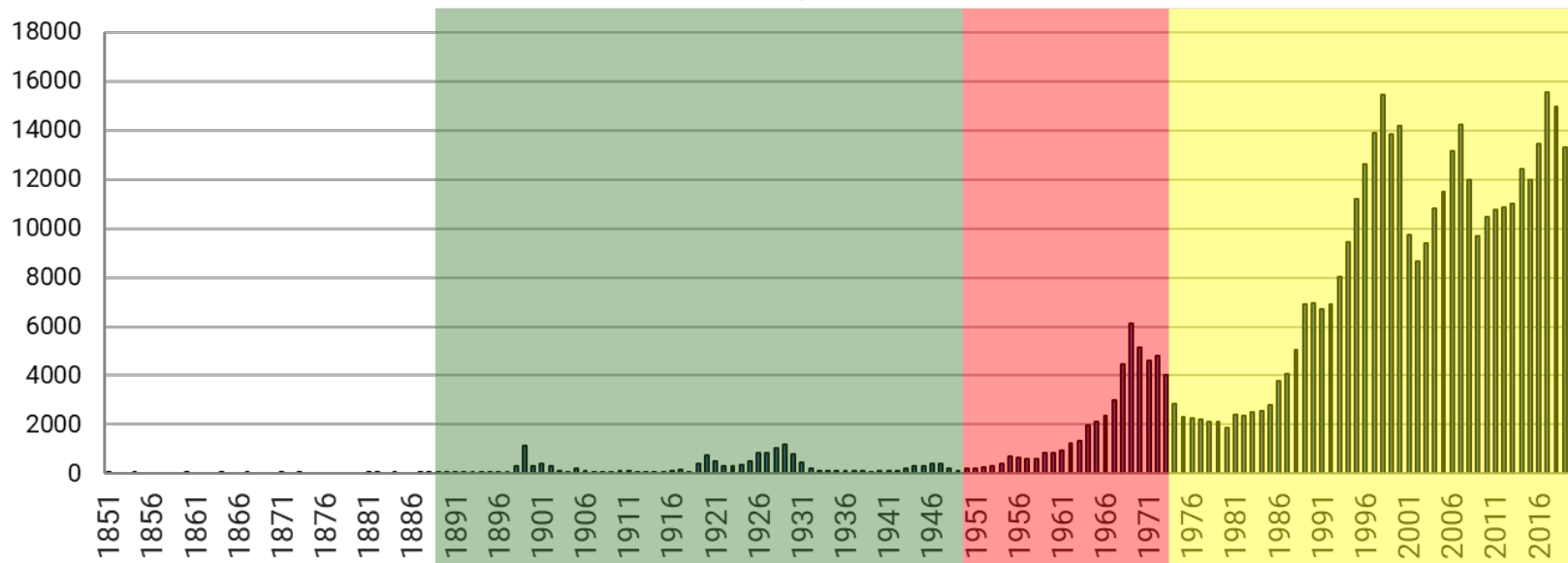
- The goals of antitrust law in general—and the intensity of antitrust enforcement—have changed dramatically over the last 130+ years

DOJ Cases Filed : Civil and Criminal
1890-2018



Antitrust law over time

US M&A Activity since 1851



Essentially no enforcement

Very hostile
toward horizontal
and vertical
mergers¹

Moderate
enforcement
against horizontal
mergers

¹ The uptick in M&A activity during this period was largely comprised of conglomerate mergers, which the agencies (with few notable unsuccessful exceptions) did not challenge.

The first 47 years (1890-1937)

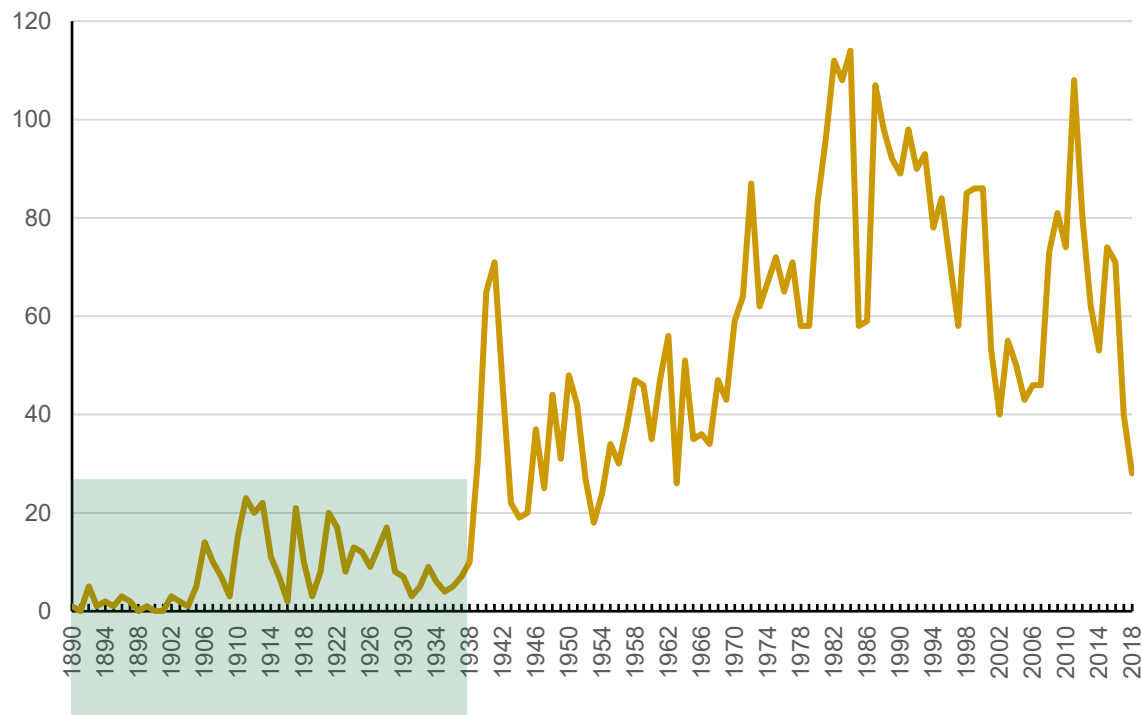
- Antitrust law was largely non-interventionist from 1890 to 1937
 - Some blips in the second Roosevelt and Taft administrations and to a somewhat lesser extent in the Wilson administration
 - But overall—
 - WWI mobilization, much of which required extensive coordination among companies, increased real GDP by 23% between 1914 and 1920¹
 - Compound average growth rate (CAGR) = 3.5%
 - The economic boom in 1920s increased real GNP by 46.6% between 1921 and 1929
 - Compound average growth rate (CAGR) = 4.9%
 - The Crash in 1929 and subsequent Great Depression resulted in an “hands off” antitrust attitude

Attitude before the Great Depression: The economy is not broken, so don't try to fix it by enforcing the antitrust laws

Attitude after the Great Depression: The economy is broken, but don't try to fix it by enforcing the antitrust laws

The first 47 years

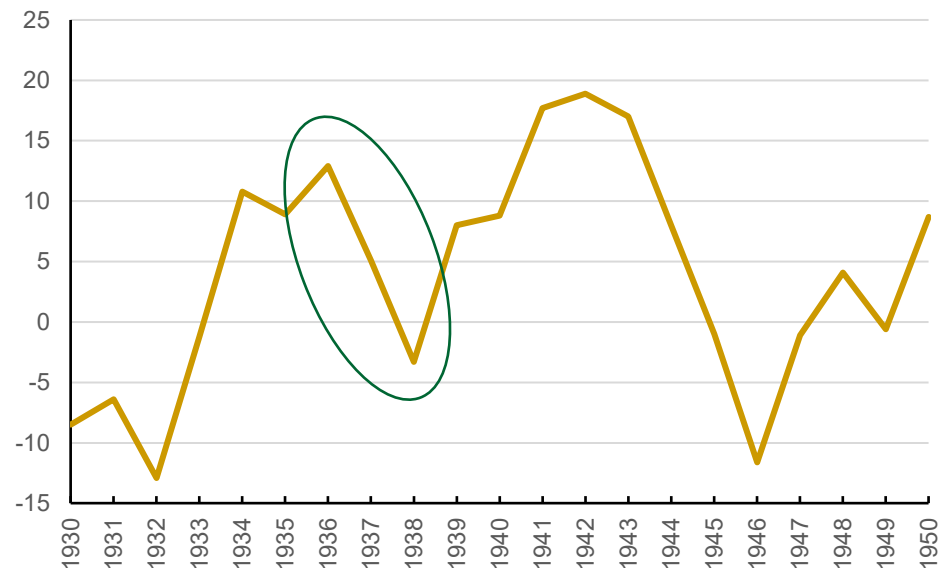
DOJ Cases Filed : Civil and Criminal
1890-2018



The 1937-1938 recession and its aftermath

- Attitudes quickly changed in 1937 as a major recession hit
 - By early 1937, production, profits, and wages had regained their early 1929 levels
- But then a deep recession hit (May 1937-June 1938)
 - Third worst recession in the twentieth century
 - Real GDP dropped 10%
 - Industrial production declined by 32%
 - Unemployment rate jumped from 12.2% in May 1937 to 20.0% in June 1938
- The Roosevelt administration came under assault in a very heated political environment

Real GDP: Annual Percent Change



The 1937-1938 recession and its aftermath

■ Roosevelt's response

- Roosevelt argued that big businesses were trying to ruin the New Deal by causing another depression that voters would react against by voting Republican¹
 - In fact, the recession was probably due to—
 - a reduction of the money supply caused by new Federal Reserve and Treasury Department policies, and
 - a contractionary fiscal policy due to an increase in taxes from the new Social Security program and a decrease in spending because of the expiration of the WWI veterans bonus²
- As part of this campaign, Attorney General Homer Cummings and new Assistant Attorney General for Antitrust Robert Jackson began an aggressive enforcement program
 - Primarily against price-fixing cartels
 - ALCOA monopolization case filed in early 1937
- Aggressive antitrust enforcement continued through the 1940s
 - Thurman Arnold continued the program when he was appointed to replace Jackson in 1938
 - Jackson became Solicitor General and then Attorney General in 1940
- Policy sustained with continued rapid economic growth created by WWII mobilization
 - Real GDP increased by 102.6% between 1938 and 1945 with war mobilization (CAGR = 10.6%)

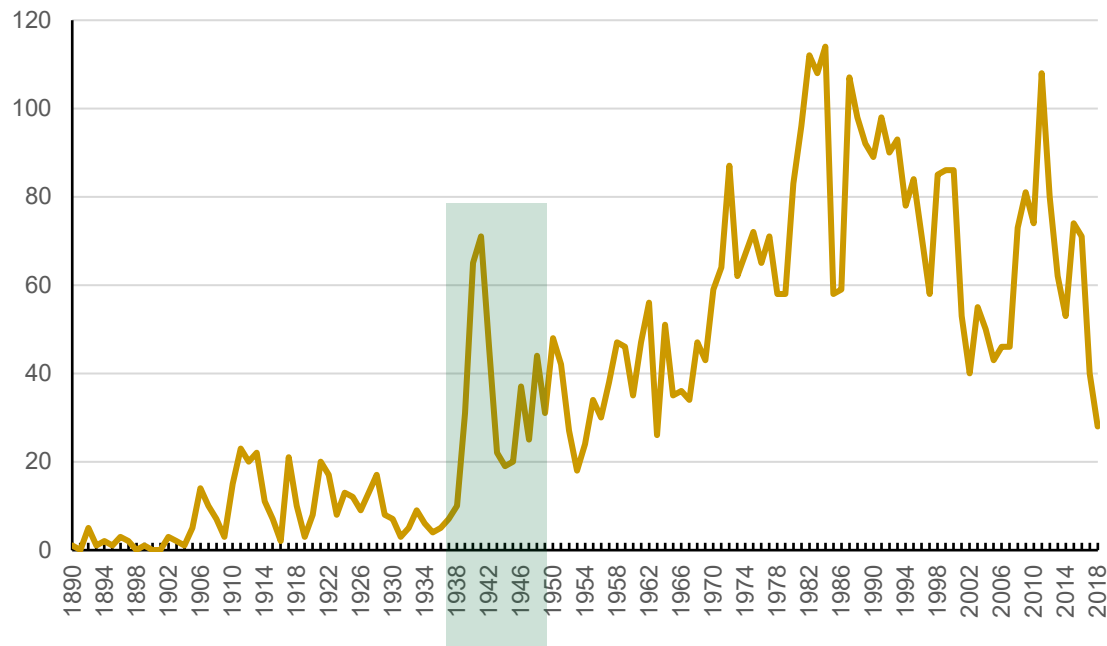
Mergers, however, did not appear to be a target

¹ See, e.g., DAVID M. KENNEDY, FREEDOM FROM FEAR: THE AMERICAN PEOPLE IN DEPRESSION AND WAR, 1929–1945, at 352 (1999).

² See Christina Romer, *The Lessons of 1937*, THE ECONOMIST (June 18, 2009).

Late Depression/World War II (1937-1945)

DOJ Cases Filed : Civil and Criminal
1890-2018



Post-World War II (1946-1972)

- Very negative and widespread public reaction to the support by large industrial enterprises that supported the Nazi Germany and Imperial Japanese regimes
- Legislative change
 - Congress enacts the 1950 Celler-Kefauver Act¹ amendments to Section 7 to close some “loopholes” that had rendered Section 7 essentially meaningless
 - Equally if not more important than the specific changes in the statute, the legislative history of the amendments was aggressively hostile to business combinations
 - This is actually the aspect of the 1950 legislation that most influenced the courts
 - Major concerns expressed in the legislative history²—
 1. Fear of “the rising tide of economic concentration in the American economy”
 2. Loss of opportunity for small business when competing with large enterprises
 3. The spread of multistate enterprises and the loss of local control over industry

¹ Ch. 1184, 64 Stat. 1125 (1950) (amending Section 7 of the Clayton Act).

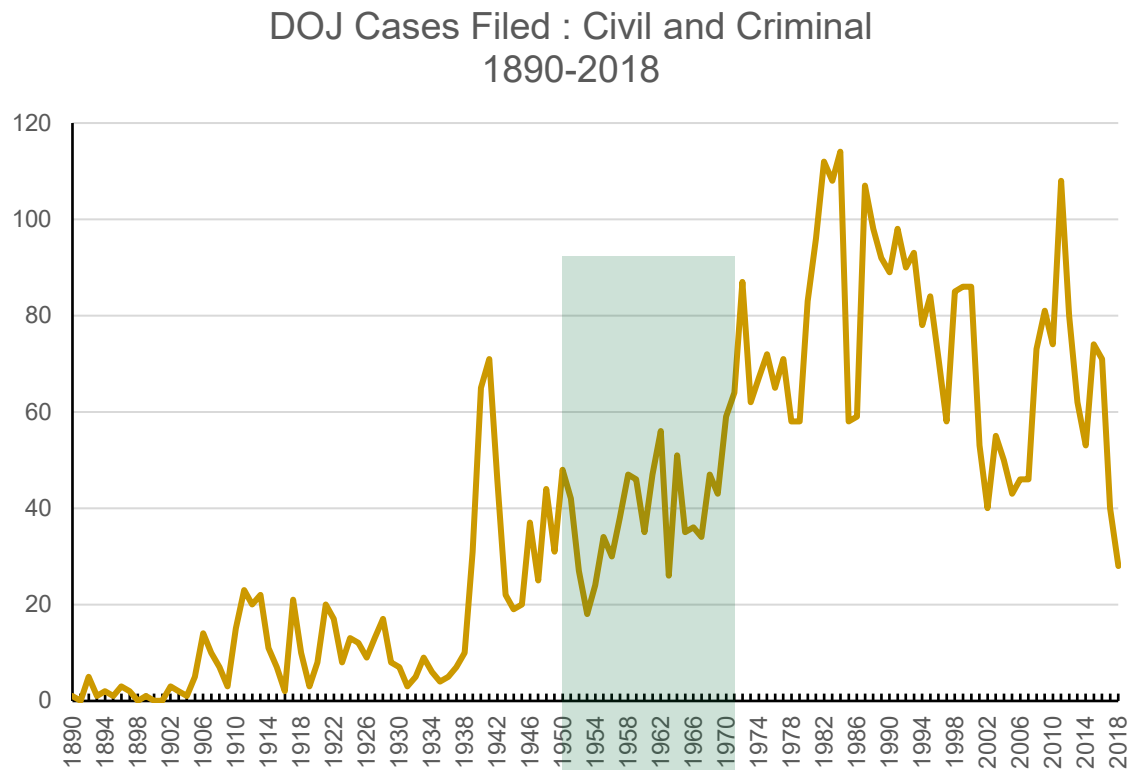
² See *Brown Shoe Co. v. United States*, 370 U.S. 294, 311-23 (1962).

Post-World War II (1946-1972)

- These congressional concerns—
 - Had broad public support
 - Did not require deep microeconomic analysis to implement
- Antitrust redirected: The new goals for the 1950s and 1960s—
 - Minimize industrial concentration beyond certain bounds
 - Maximize the prospects of survival of small businesses
 - Minimize restraints on freedom of choice of economic actors

Post-World War II (1946-1971)

- The increasingly restrictive antitrust regime resulted in more prosecutions



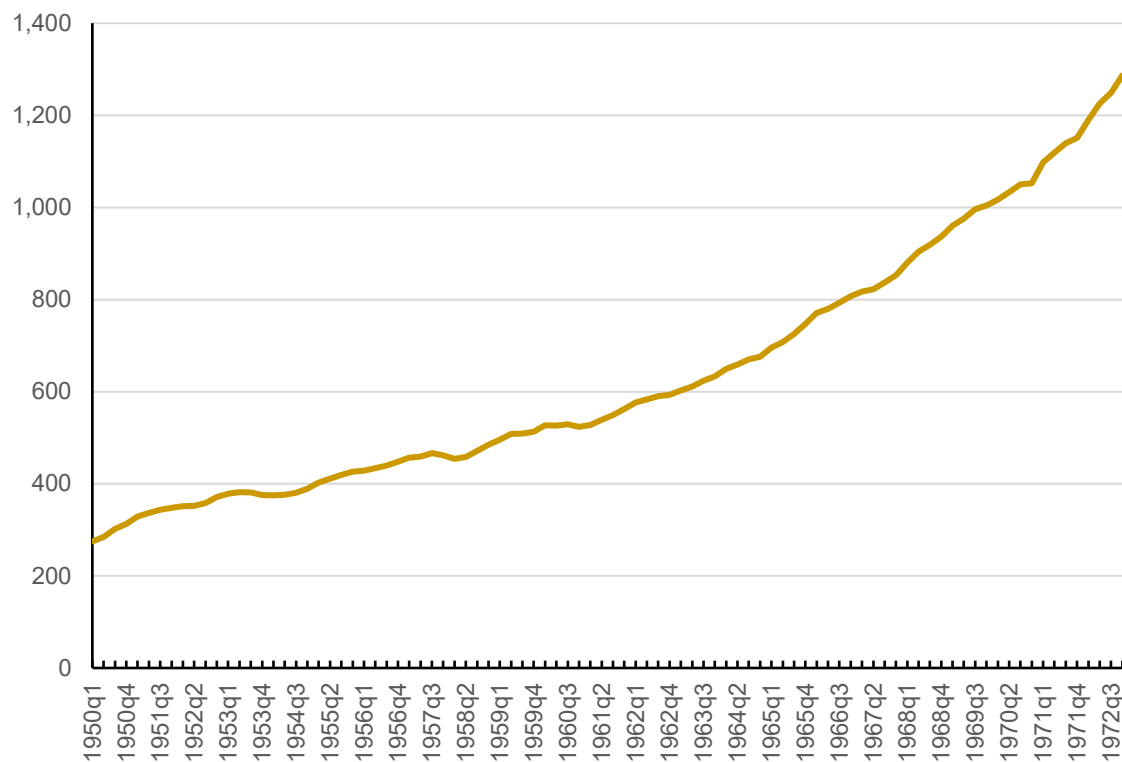
Post-World War II (1946-1972)

- To the extent this restrictive implementation of the law reduced productive efficiency, neither Congress nor the public cared
 - Any inefficiencies became noise in the economic boom that followed WWI for two decades

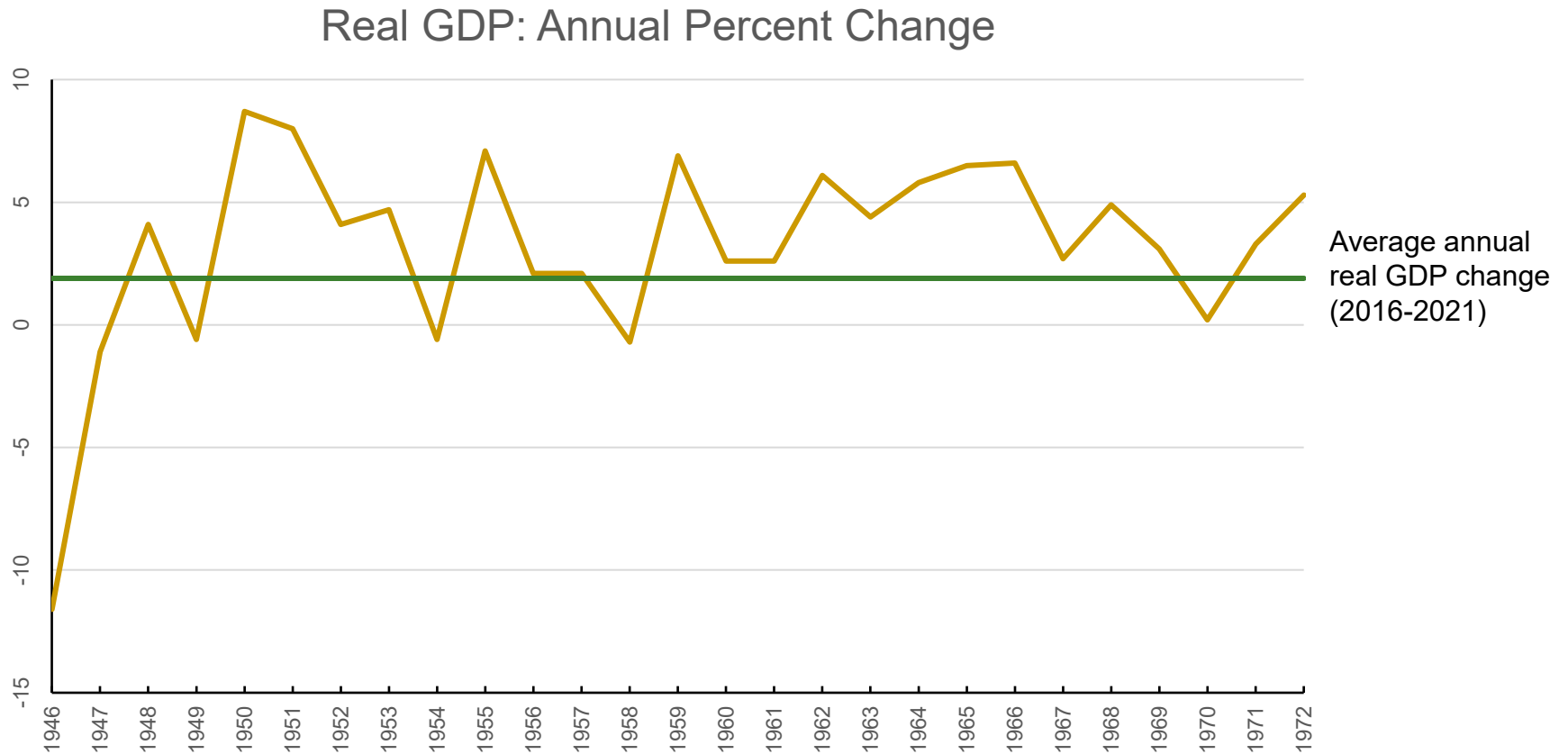
Indicator	1950-1972
Real GDP (average annual growth)	4.1%
Nonfarm business productivity (average annual rate)	2.8%
Inflation (average annual change Dec. to Dec.)	2.6% Max = 6.2%
Bank prime loan rate (annual—data series starts in 1956)	5.8% Max = 8.0%
Unemployment (average monthly rate)	4.6% Max = 7.5%
Median real family income (average annual change)	3.3%

Post-World War II (1946-1972)

Quarterly Real GDP
(billions of chained 2005 dollars)



Post-World War II (1946-1972)



Post-World War II (1946-1972)

- Resulted in an increasingly restrictive antitrust regime
 - Further tightening on horizontal price fixing
 - Actually begin somewhat earlier (*Socony-Vacuum*)
 - Easing of rules to find concerted action (*Container Corp.*)
 - Horizontal mergers—close to per se unlawful
 - E.g., *Brown Shoe*, *PNB*, *Pabst/Blast*, *Von's Grocery*, the Potter Stewart rule, 1968 Merger Guidelines
 - Vertical mergers—close to per se unlawful
 - *DuPont/GM*
 - Conglomerate mergers seriously challenged
 - *P&G*, *Falstaff*, *El Paso Natural Gas*, the DOJ potential competition campaign
 - Tightening of Section 2 prohibitions and enforcement
 - *Alcoa*
 - *Grinnell*, *IBM* (filed 1969), *AT&T* (filed 1974)
 - “Shared monopoly” theory

Post-World War II (1946-1972)

- Resulted in an increasingly restrictive antitrust regime
 - Nonprice vertical restraints—per se unlawful
 - *Albrecht*
 - *Schwinn* (1967) (overruling *White Motor* (1963))
 - Reinforcement of tying arrangements as per se illegal
 - *Northern Pacific* (1958)
 - Tightening of rules on refusals to deal
 - *Associated Press* (1945) (horizontal boycott)
 - *Klor's* (1959) (secondary boycott)
 - Horizontal combinations/joint ventures
 - *Sealy*
 - *Topco*
 - Remedies and procedure
 - *DuPont* (1957): Essentially holding that the DOJ cannot be time-barred in a government injunctive action where there continue to be effects traceable to the challenged acquisition and permitting a challenge 30 years after acquisition to proceed on the merits
 - *Hanover Shoe* (1968): Holding that Clayton Act § 4 does not recognize a “passing on” defense

The “malaise” period (1973 to 1981)

- “Stagflation” gripped the nation¹
 - Significant inflation as a result of the Mideast oil shocks in 1973 and 1979 and the easy monetary policy of the late 1960s to finance the Vietnam War
 - “Productivity crisis” from the obsolescence of “old economy” and equipment
- Substantial concern about U.S. competitiveness in the world market (especially against Japan) in areas that since WWII that had been traditional American strengths (e.g., automobiles, steel)
- Growing influx of imported manufacturing goods threatened some American industries in the domestic market (e.g., consumer electronics)
- Gasoline shortages/price controls resulting from OPEC output restrictions

¹ “Stagflation” means low real growth and high inflation.

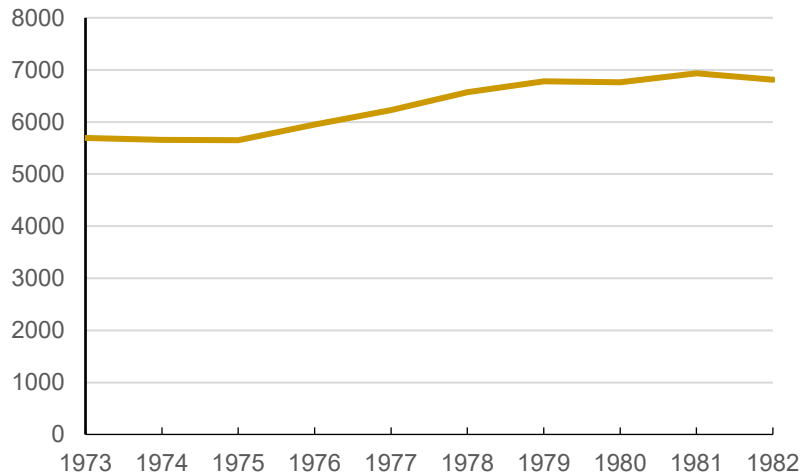
The “malaise” period (1973 to 1981)

- Economic conditions—Not good times

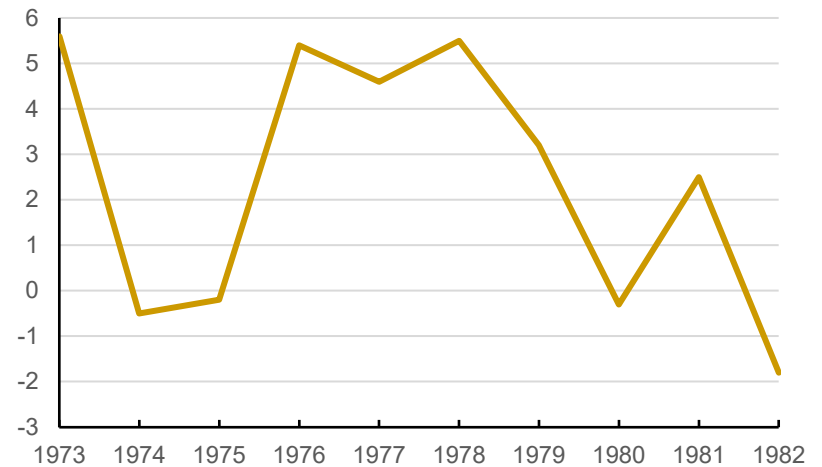
Indicator	1950-1972	1973-1982
Real GDP (average annual growth)	4.1%	2.4%
Nonfarm business productivity (average annual rate)	2.8%	1.0%
Inflation (average annual change Dec. to Dec.)	2.6% Max = 6.2%	8.7% Max = 13.3%
Bank prime loan rate (annual—data series starts in 1956)	5.8% Max = 8.0%	11.10% Max = 18.9%
Unemployment (average monthly rate)	4.6% Max = 7.5%	7.0% Max = 10.8%
Median real family income (average annual change)	3.3%	-0.2%

The “malaise” period (1973 to 1981)

Real Gross Domestic Product
(2012 chained billion dollars)



Real GDP:
Annual Percent Change



The “malaise” period (1973 to 1981)

- Emerging sentiment toward business
 - Government policies generally needed to be revised to:
 - Foster America’s industrial competitiveness
 - Revive the nation’s industrial base
 - Return to the country to the post-WWII standards of steady growth, low inflation, and low unemployment
 - WWII concerns about the evils of large industrial concentrations largely had dissipated
 - Could not afford to act on these concerns in any event, especially given the perceived success of the Japanese keiretsu
- Rapidly emerging perception/consensus that—
 - Many antitrust rules impeded efficient business operations and constrained competitiveness
 - Antitrust was a blunt and unnecessary instrument for achieving distributional goals
 - To the extent that distribution goals remain, other government instruments might be better suited to achieving them
- Strong political pressures to address these concerns

The “malaise” period (1973 to 1981)

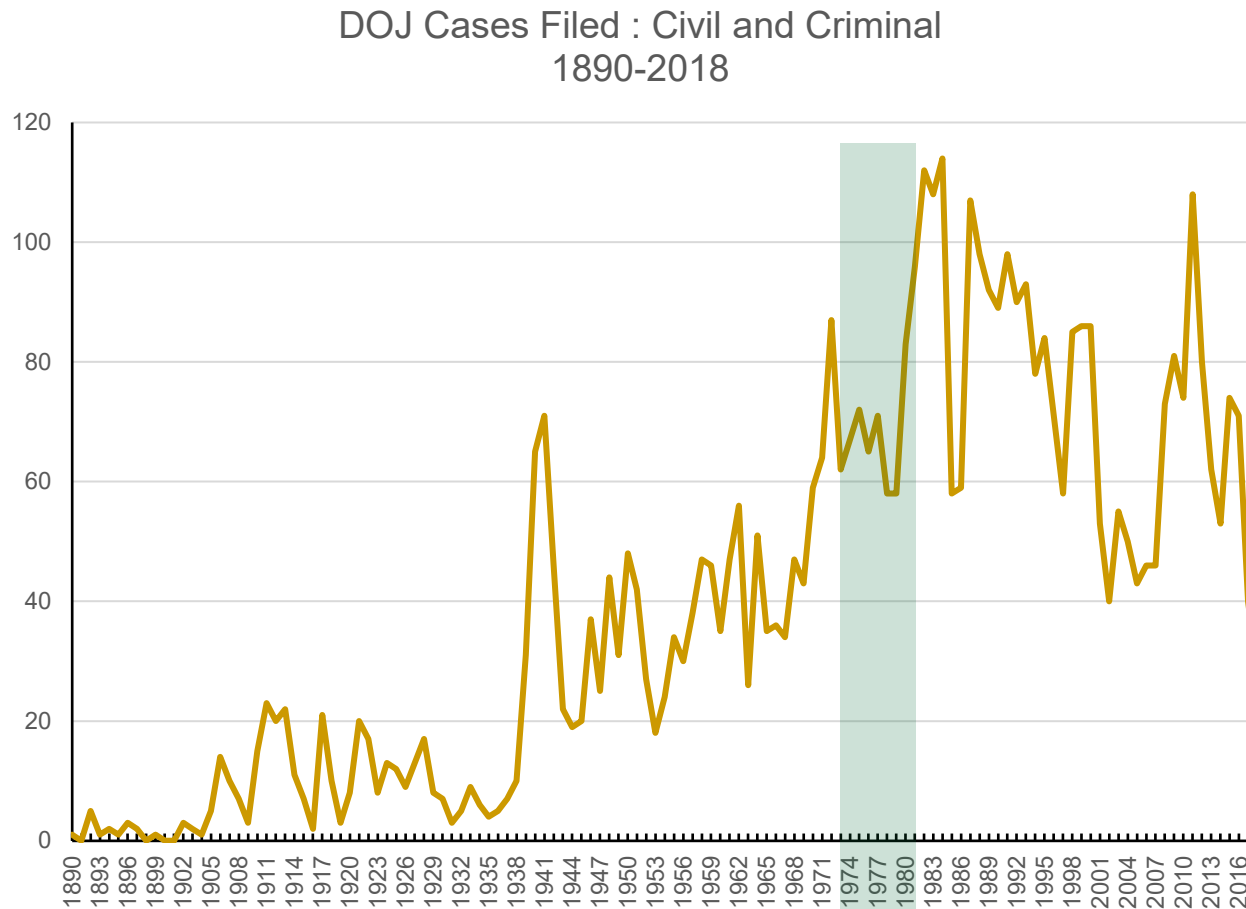
- As part of the response, courts begin to “loosen” antitrust restrictions to maximize output and industrial productivity
 - Antitrust narrowly limited to competition concerns
 - *Professional Engineers*
 - Explicitly adopt the “consumer welfare” standard
 - *Reiter*
 - Continued aggressive approach to horizontal price fixing
 - *Goldfarb, Gypsum, McLain, Catalano, Texas Industries, Hydrolevel*
 - Some loosening of Section 1 restraints on joint ventures
 - *Broadcast Music*
- Horizontal mergers—near per se illegality being replaced by an economic effects analysis
 - *General Dynamics*
 - Vertical mergers—can be anticompetitive but increasingly remediated through “access” consent decrees
 - Potential competition mergers
 - Courts rejected DOJ’s prosecution campaign

The “malaise” period (1973 to 1981)

- Courts begin to “loosen” antitrust restrictions to maximize output and industrial productivity
 - Section 2
 - General rejection of “shared monopoly” as an actionable theory of harm
 - But DOJ brought the *IBM* monopolization case in 1974
 - Nonprice vertical restraints—returned to rule of reason treatment
 - *GTE Sylvania*
 - Robinson-Patman Act
 - DOJ urges repeal, viewing the RPA as anticompetitive
 - DOJ and FTC essentially cease enforcing
 - Significant limitations on antitrust standing limited private parties’ ability to sue
 - *Brunswick*, *Illinois Brick*, *J. Truett Payne*

Note: The DOJ and FTC resisted many of these changes throughout this period

The “malaise” period (1973 to 1981)



The modern period (1982 to present)

- Ronald Reagan elected president in 1980
 - Major emphasis on growing the economy by reducing government intervention in private affairs: The four Reagan economic planks—
 1. Reduce the growth of government spending
 2. Reduce the federal income tax and capital gains tax
 3. Reduce government regulation
 4. Tighten the money supply in order to reduce inflation
 - Stagflation brought under control—Economy starts to grow
- George Bush elected president in 1988
 - Largely continued Reagan's policies
 - DOJ and FTC issue 1992 Horizontal Merger Guidelines
- Bill Clinton elected president in 1992
 - After 1994 midterm election, adopted “triangulation” approach to policy-making
 - Somewhat more aggressive in antitrust enforcement, but did not materially alter antitrust enforcement goals

The modern period (1982 to present)

- Continued concern about increasing industrial output and productivity
 - Economic indicators during period have an upside-down “U” shape:
 - Recovering—not too gracefully—from the 1970s during 1983-1992
 - Reach affirmatively good times during 1993-2000 (which ended with the dot.com bust)
 - More stagnant times during 2001-2006 (with slow but steady recovery aided by an easy money policy and resulting in an asset bubble and significant overleveraging)
 - Financial crisis, deep recession, and very slow recovery since 2007
 - Just as business returned to doing well, COVID hit
 - But sustained growth, like that found in the post-WWII period, never returned to the U.S.
 - U.S. never politically regained the “luxury” of trading off output and efficiency for deconcentration/small business/freedom of economic choice concerns

The modern period (1982 to present)

- Economic conditions—recovering, then pretty good, then not too good with a slow recovery, then COVID

Indicator	1973-1982	1983-2006
Real GDP (average annual growth)	2.4%	3.4%
Nonfarm business productivity (average annual rate)	1.0%	2.2%
Inflation (average annual change Dec. to Dec.)	8.7% Max = 13.3%	3.1% Max = 6.1%
Bank prime loan rate (annual—data series starts in 1956)	11.1% Max = 18.9%	8.0% Max = 12.0%
Unemployment (average monthly rate)	7.0% Max = 10.8%	5.9% Max = 10.4%
Median real family income (average annual change)	-0.2%	0.9%

The modern period (1982 to present)



The modern period (1982 to present)

- *New view*: Antitrust law should maximize output and industrial productivity to improve “consumer welfare”
 - The 1970s idea that antitrust law should maximize output and industrial productivity to restore America’s competitiveness readily morphed into the “consumer welfare standard” in the 1980s
 - Robert Bork popularized the term “consumer welfare” in *The Antitrust Paradox* (1978)
 - Adoption by the Supreme Court
 - In 1979, the Supreme Court in *Reiter v. Sonotone Corp.* observed that “Congress designed the Sherman Act as a ‘consumer welfare prescription’”¹
 - Since *Reiter*, the Supreme Court has reaffirmed the consumer welfare standard as the goal of antitrust law in at least six other cases (including most recently in the 2021-2022 term)²
 - Today, at least seven of the Supreme Court justices are firmly committed to the consumer welfare standard as the lens through which antitrust law should be interpreted and applied³

¹ 442 U.S. 330, 343 (1979) (citing Robert Bork, *The Antitrust Paradox* 66 (1978)).

² See *Nat'l Collegiate Athletic Ass'n v. Alston*, 141 S. Ct. 2141, 2166 (2021); *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2290 (2018); *Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*, 551 U.S. 877, 889, 902, 906 (2007); *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 324 (2007); *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 221 (1993); *Nat'l Collegiate Athletic Ass'n v. Bd. of Regents of Univ. of Oklahoma*, 468 U.S. 85, 107 (1984).

³ The Westlaw antitrust library lists also 500 cases that use the term “consumer welfare,” but some of these are not strictly antitrust cases and in others the term may have appeared in something other than the majority decision.

The modern period (1982 to present)

■ Antitrust rules refashioned

- ❑ Further tightening and aggressive enforcement against “garden variety” horizontal price fixing
- ❑ But new limitations on finding concerted action
 - Single entities: *Copperweld*, *American Needle*
 - From circumstantial evidence: *Matsushita*, *Business Elecs.*, *Brooke Group*
- ❑ Continued reinforcement of the consumer welfare standard
 - *NCAA*, *Brooke Group*, *Weyerhaeuser*, *Leegin*, *American Express*, *Alston*
- ❑ Requires strong economic approach to analyzing competitive effects in mergers
 - 1982 DOJ Merger Guidelines
 - 1992 DOJ/FTC Horizontal Merger Guidelines
 - 1997 efficiencies amendment to the Horizontal Merger Guidelines
 - 2010 DOJ/FTC Horizontal Merger Guidelines
 - 2020 DOJ/FTC Vertical Merger Guidelines
- ❑ Vertical mergers largely viewed as procompetitive
 - Only episodic government actions—essentially all settled through “access” consent decrees
- ❑ Conglomerate merger theories of harm definitely rejected

The modern period (1982 to present)

■ Antitrust rules refashioned

- Significant loosening of restrictions on dominant firm behavior
 - *Spectrum Sports, Brooke Group, Trinko, Linkline, Weyerhaeuser*, DOJ Section 2 Report
 - Only episodic government actions (*Microsoft, American Airlines, Intel*)
 - But see *Aspen Skiing*, withdrawal of Section 2 report
- Significant loosening of restrictions on distributional restraints
 - *Monsanto, Kahn, Leegin*
 - But see *Kodak*
- Loosening on restrictions on some group boycotts
 - *Northwest Wholesale Stationers*
- New requirement for finding illegal tying arrangements
 - *Jefferson Parish*
- Remedies and procedure
 - *Monfort, Empagran, Twombly*
 - But see *California v. ARC America Corp*

Modern Critiques of Merger Antitrust Law

The reformers' argument

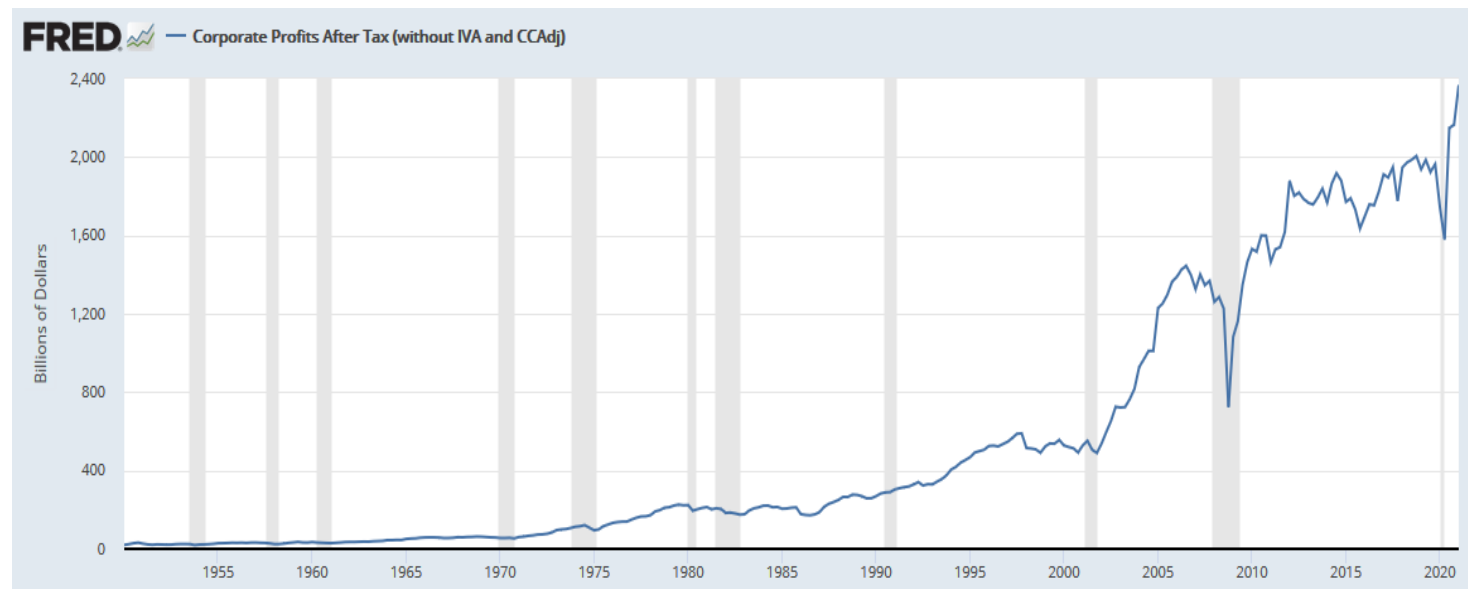
- The bottom line for the reformers

The economy is not working for average Americans—and the current antitrust regime is a large part of the problem

Note: The slides that follow give the reformers' argument. They are not designed to give a neutral view and some of the studies cited have methodological flaws.

The reformers' argument

- Corporate profits are soaring in absolute dollars

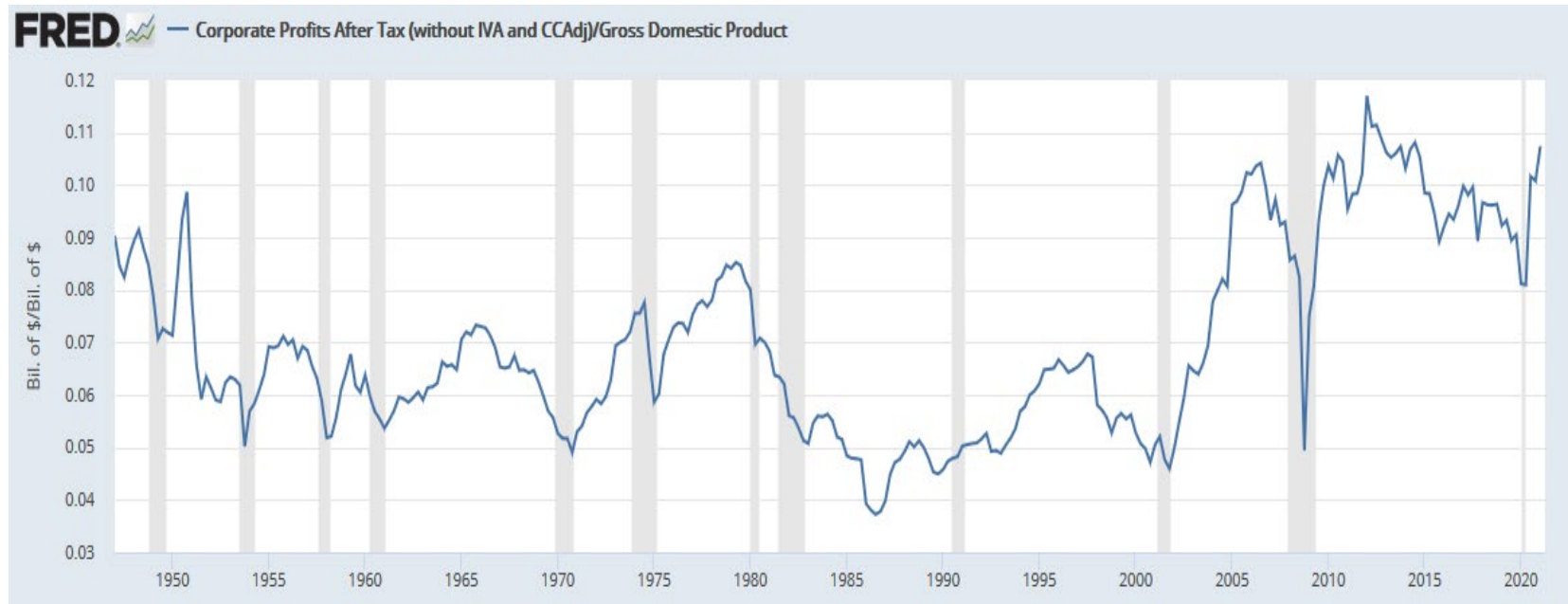


Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis, Corporate Profits After Tax (without IVA and CCAdj) [CP], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CP>, July 31, 2021.

The reformers' argument

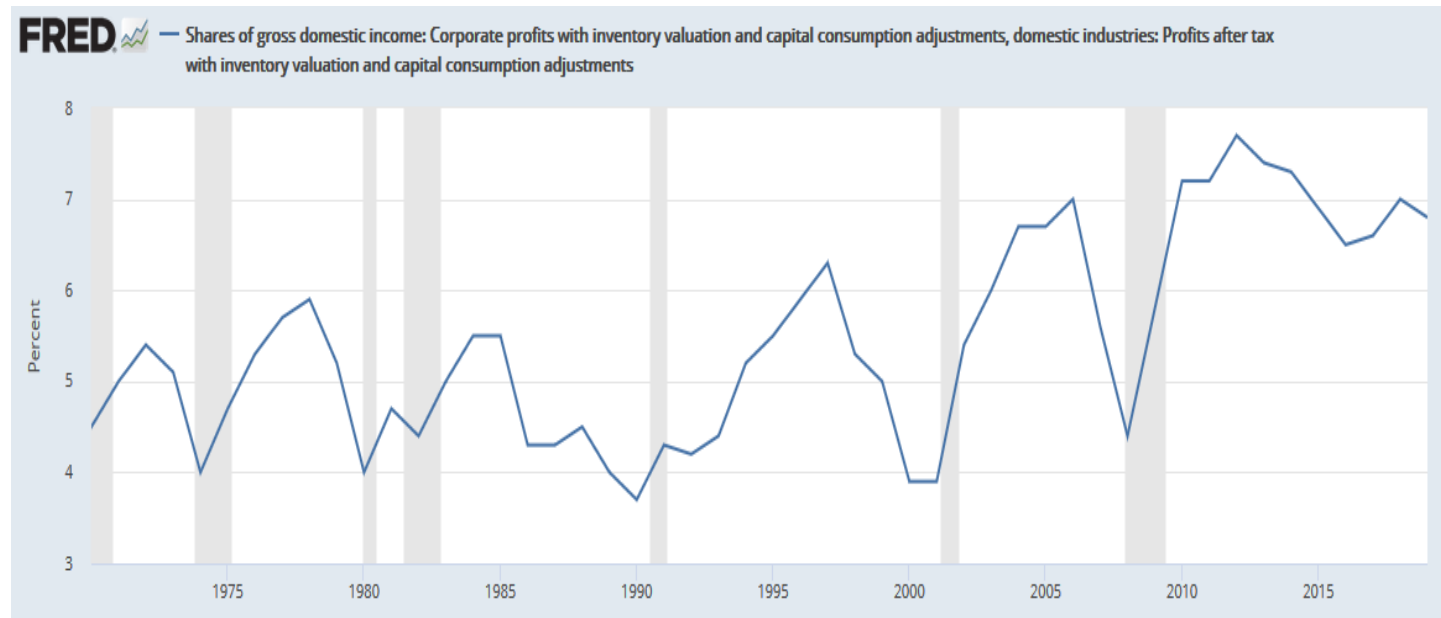
- . . . and as a percentage of GDP



Source: U.S. Bureau of Economic Analysis, Corporate Profits After Tax (without IVA and CCAdj) [CP], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CP>, August 1, 2021.

The reformers' argument

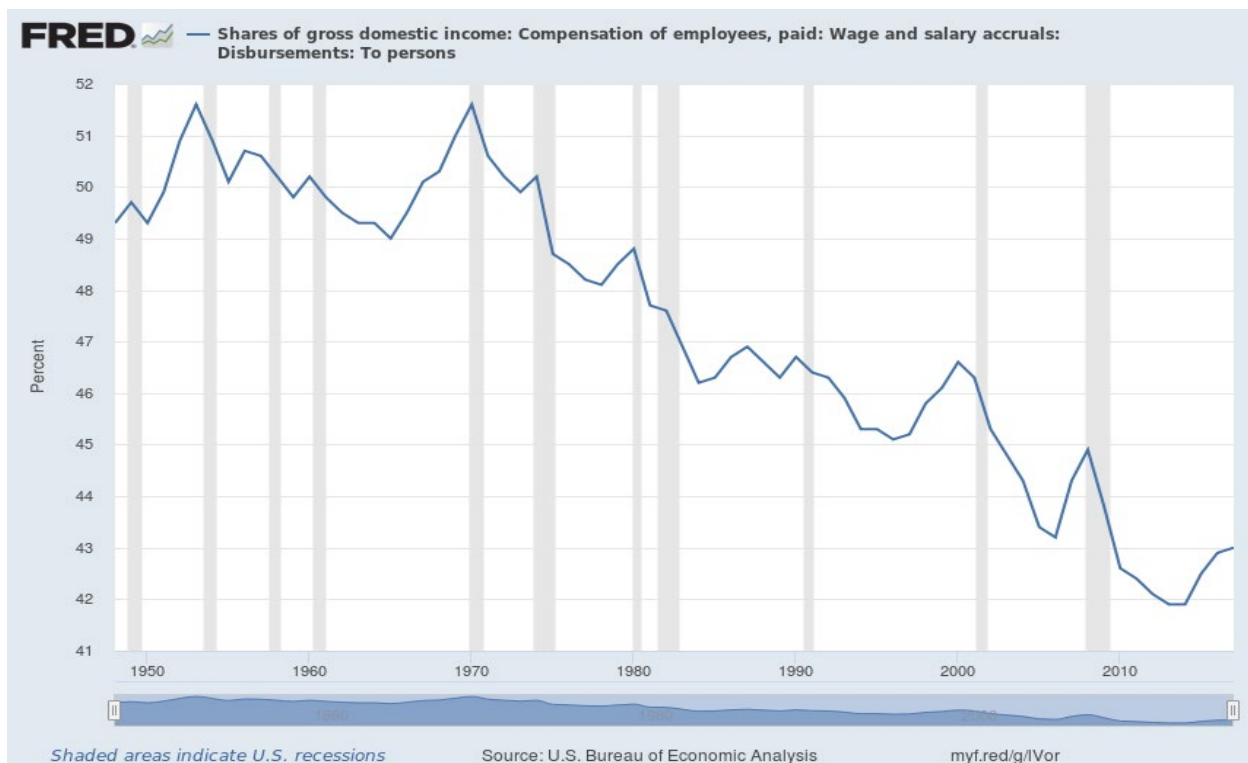
- Corporate profits account for an increasing share of gross domestic income



Source: U.S. Bureau of Economic Analysis, Shares of gross domestic income: Corporate profits with inventory valuation and capital consumption adjustments, domestic industries: Profits after tax with inventory valuation and capital consumption adjustments [W273RE1A156NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/W273RE1A156NBEA>, August 2, 2021.

The reformers' argument

- . . .while the labor share of gross domestic income has dramatically declined

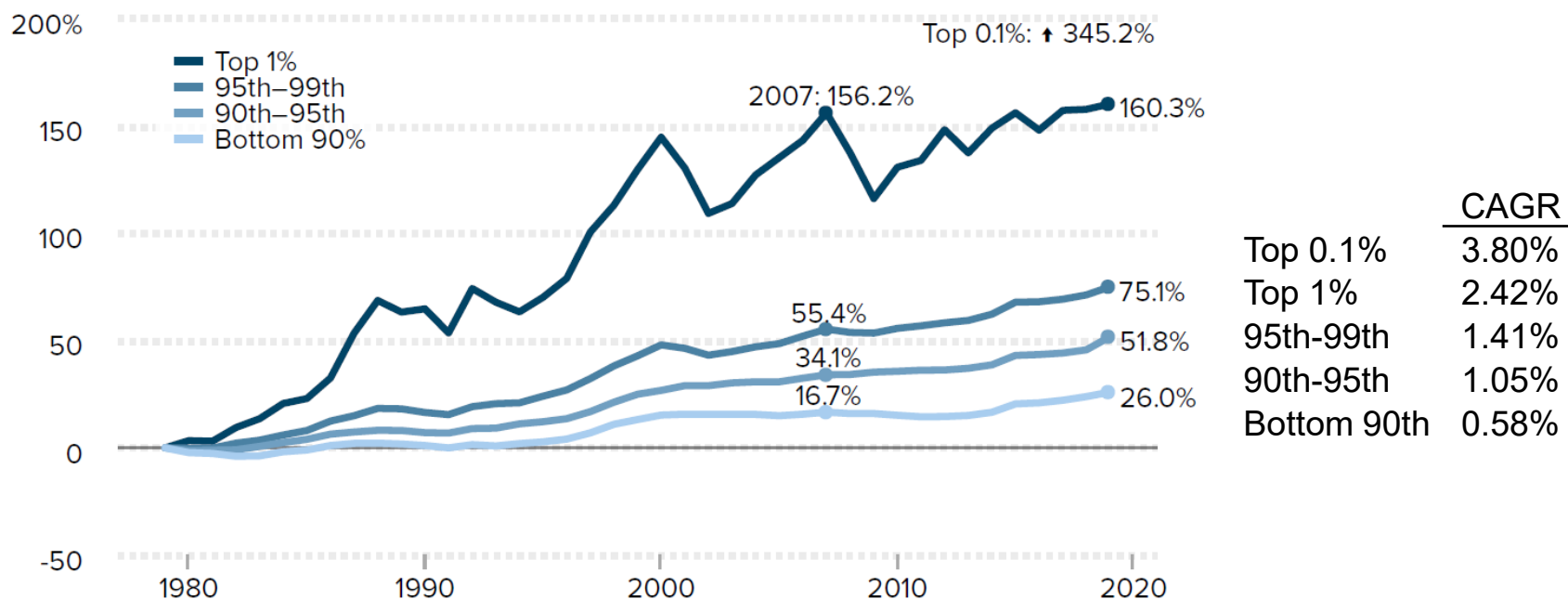


Source: U.S. Bureau of Economic Analysis, Shares of gross domestic income: Compensation of employees, paid: Wage and salary accruals: Disbursements: to persons [W270RE1A156NBEA], *retrieved from* FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/W270RE1A156NBEA>, July 31, 2021.

The reformers' argument

- Real wages for average workers have largely stagnated

Cumulative percent change in real annual wages, by wage group, 1979–2019

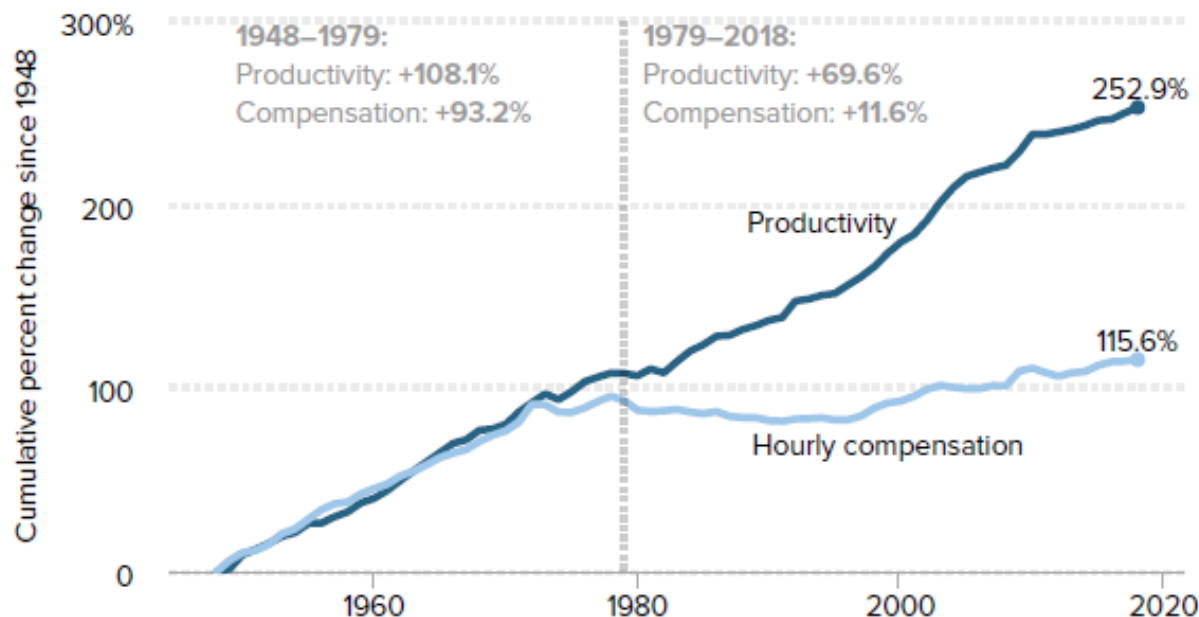


Source: Lawrence Mishel & Josh Bivens, Identifying the Policy Levers Generating Wage Suppression and Wage Inequality 8 (Economic Policy Institute May 13, 2021), available at <https://files.epi.org/uploads/215903.pdf>.

The reformers' argument

- Moreover, workers are not being compensated with productivity growth

Productivity growth and hourly compensation growth, 1948–2018

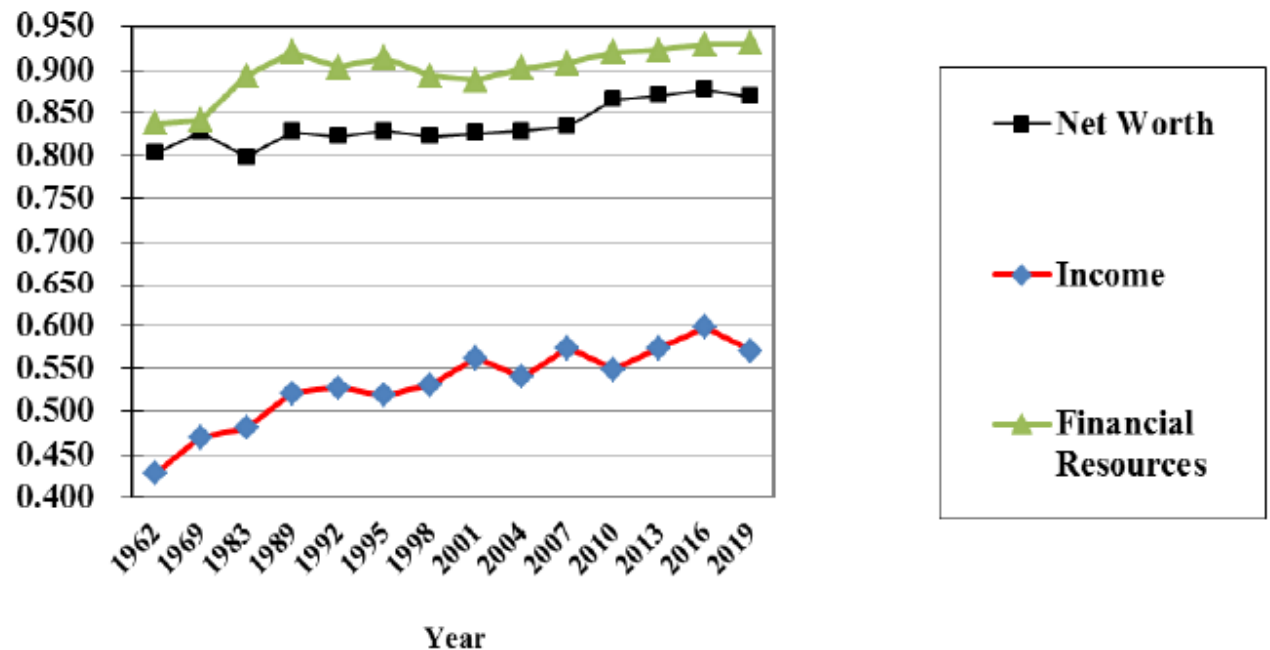


Source: Elise Gould, State of Working America Wages 2019, at 38 (Economic Policy Institute 24 (Feb. 20, 2020), <https://files.epi.org/pdf/183498.pdf>).

The reformers' argument

- Income inequality correspondingly has grown increasingly worse . . .

The higher the Gini coefficient, the greater the inequality

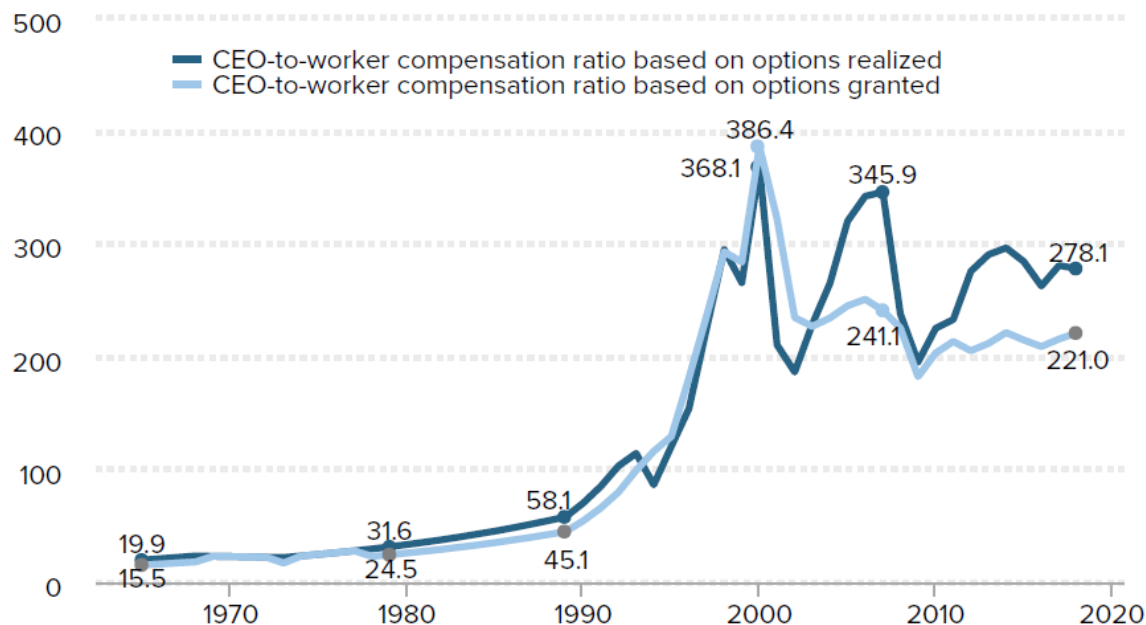


Source: Edward N. Wolff, Household Wealth Trends In The United States, 1962 to 2019: Median Wealth Rebounds... But Not Enough 71 (Figure 4) (NBER Working Paper No. 28383, Jn. 2021), <http://www.nber.org/papers/w28383>.

The reformers' argument

- . . . with CEOs on average now making 278x more than typical workers

CEO-to-worker compensation ratio, 1965–2018



Source: Lawrence Mishel & Julia Wolfe, CEO Compensation Has Grown 940% since 1978, at 14 (Economic Policy Institute 1979), *available at* <https://www.epi.org/publication/ceo-compensation-2018/#:~:text=CEO%20compensation%2C%20CEO-to-worker%20compensation%20ratio%2C%20and%20stock%20prices,%20%2029.7%20%2017%20more%20rows%20.>

The reformers' argument

- The “American dream” of advancement over generations is declining

Percentage of U.S. Children Earning More than Their Parents at Age 30 by Year of Birth, 1940-1984



Note: Children's income is the sum of individual and spousal income at age 30, excluding immigrants after 1994. Parental income is the sum of the spouses' incomes for families in which the highest earner is ages 25-35.

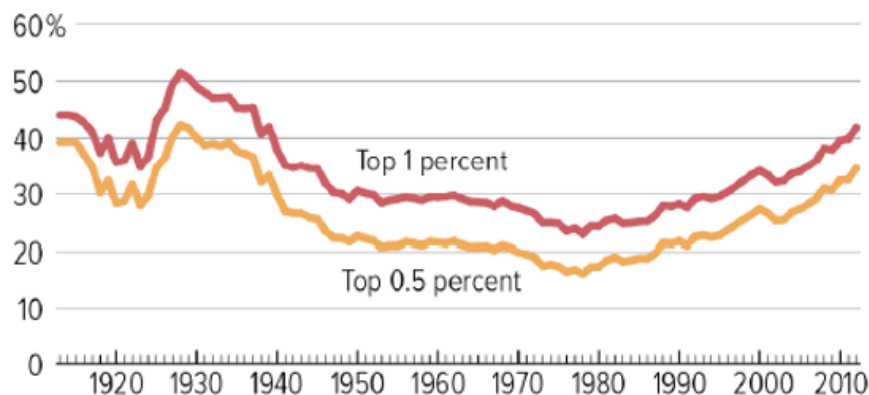
Source: Peterson Institute for International Economics, How to Fix Economic Inequality? 7 (figure 7) (2020), <https://www.piie.com/microsites/how-fix-economic-inequality>.

The reformers' argument

- Wealth is even more concentrated than income, with wealth inequality approaching the level of the 1920s

Wealth Concentration Has Been Rising Toward Early 20th Century Levels

Share of total wealth held by the wealthiest families, 1913-2012



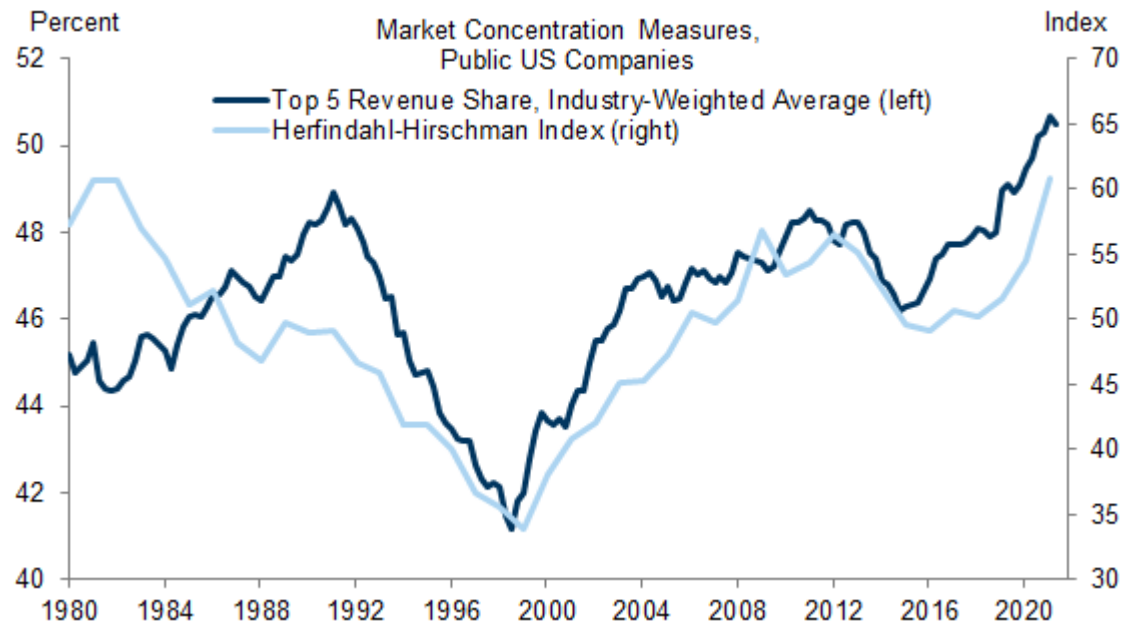
Source: Saez and Zucman, May 2016

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Source: Chad Stone, Danilo Trisi, Arloc Sherman & Jennifer Beltrán, A Guide to Statistics on Historical Trends in Income Inequality 16 (figure 6) (Center on Budget and Policy Priorities updated June 13, 2020), <https://www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality>.

The reformers' argument

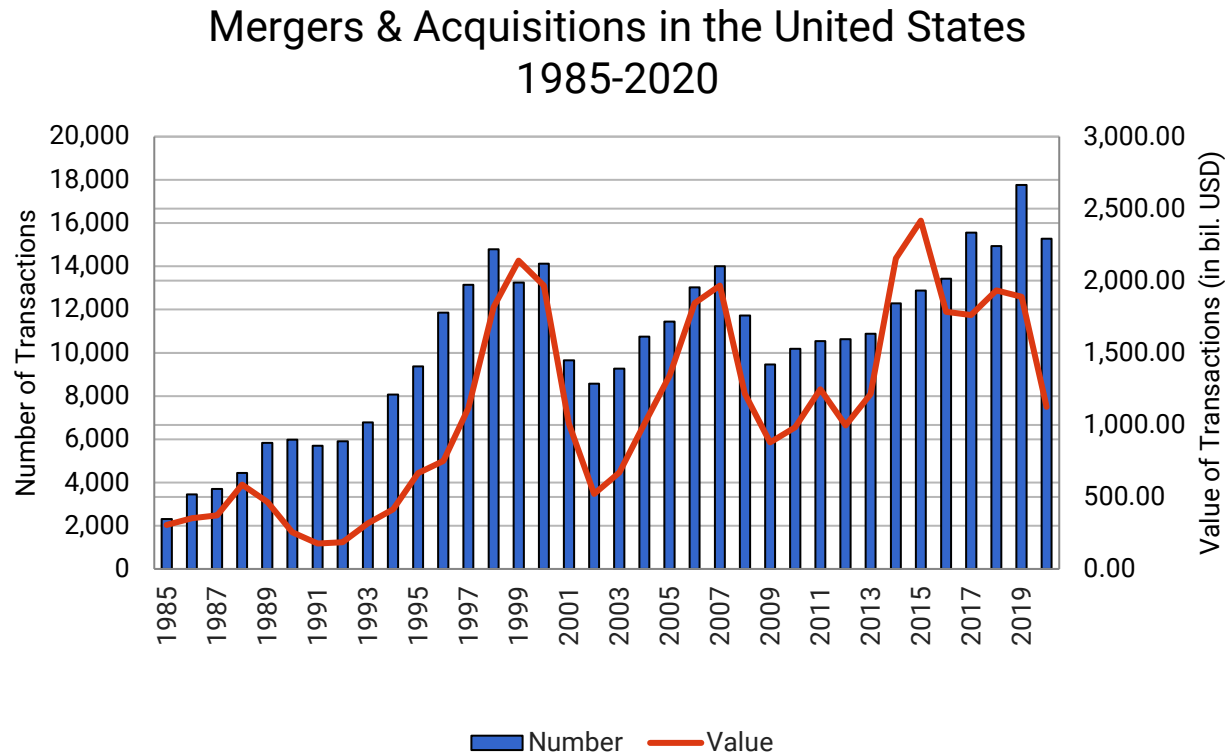
- Industrial concentration has been steadily increasing since the mid-1990s



Source: Joseph Briggs & Alec Phillips, *Concentration, Competition, and the Antitrust Policy Outlook* ex. 1 (Goldman Sachs US Economics Analyst July 18, 2021)

The reformers' argument

- Acquisitions are a significant source of increased concentration . . .



Source: Institute for Mergers, Acquisitions and Alliances (IMAA), M&A Statistics, <https://imaa-institute.org/m-and-a-statistics-countries/#Mergers-Acquisitions-United-States-of-America> (last visited Aug. 2, 2021).

The reformers' argument

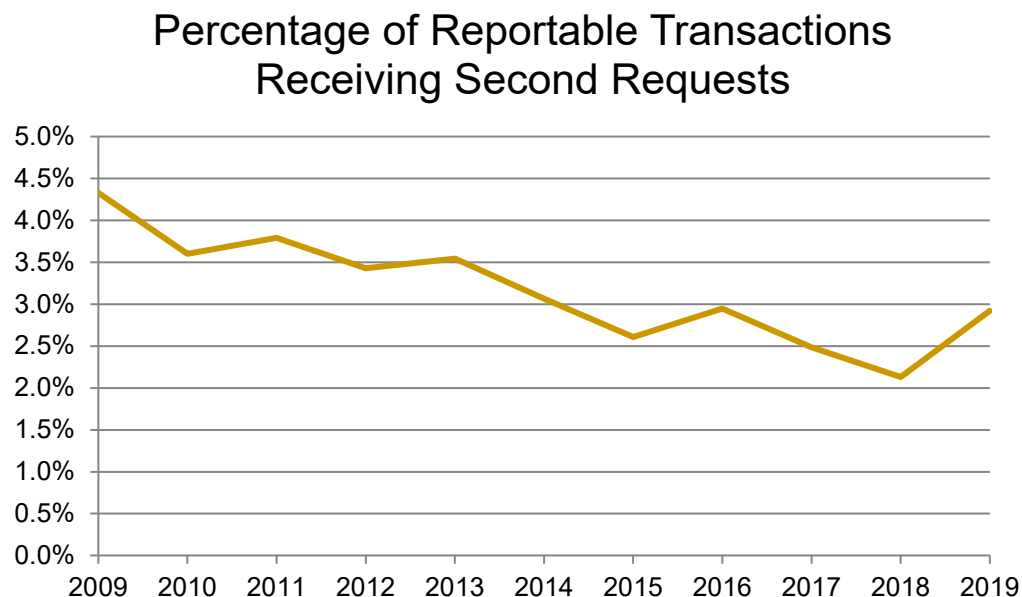
- . . . and some acquisitions have been “megadeals” . . .

Rank	Date	Acquiror	Target	Value (bil. USD)
1	2000	America Online Inc	Time Warner	164.747
2	2013	Verizon Communications Inc	Verizon Wireless Inc	130.298
3	1999	Pfizer Inc	Warner-Lambert Co	89.168
4	2016	AT&T Inc	Time Warner Inc	85.408
5	1998	Exxon Corp	Mobil Corp	78.946
6	2006	AT&T Inc	BellSouth Corp	72.671
7	1998	Travelers Group Inc	Citicorp	72.558
8	2001	Comcast Corp	AT&T Broadband & Internet Svcs	72.041
9	2018	Cigna Corp	Express Scripts Holding Co	69.770
10	2014	Actavis PLC	Allergan Inc	68.445
11	2017	Walt Disney Co.	21st Century Fox	68.422
12	2009	Pfizer Inc	Wyeth	67.286
13	2015	Dell Inc	EMC Corp	66.000
14	1998	SBC Communications Inc	Ameritech Corp	62.593
15	2015	The Dow Chemical Co	DuPont	62.111
16	1998	NationsBank Corp,Charlotte,NC	BankAmerica Corp	61.633
17	1999	Vodafone Group PLC	AirTouch Communications Inc	60.287
18	2002	Pfizer Inc	Pharmacia Corp	59.515
19	2010	Preferred Shareholders	AIG	58.977
20	2004	JPMorgan Chase & Co	Bank One Corp,Chicago,IL	58.663
21	2016	Bayer AG	Monsanto Co	56.598
22	1999	Qwest Commun Intl Inc	US WEST Inc	56.307
23	2015	Charter Communications Inc	Time Warner Cable Inc	55.638
24	2011	Shareholders	Abbott Laboratories-Research	55.513
25	2009	Vehicle Acq Holdings LLC	General Motors-Cert Assets	55.280

Source: Institute for Mergers, Acquisitions and Alliances (IMAA), M&A Statistics, <https://imaa-institute.org/m-and-a-statistics-countries/#Mergers-Acquisitions-United-States-of-America> (last visited Aug. 2, 2021).

The reformers' argument

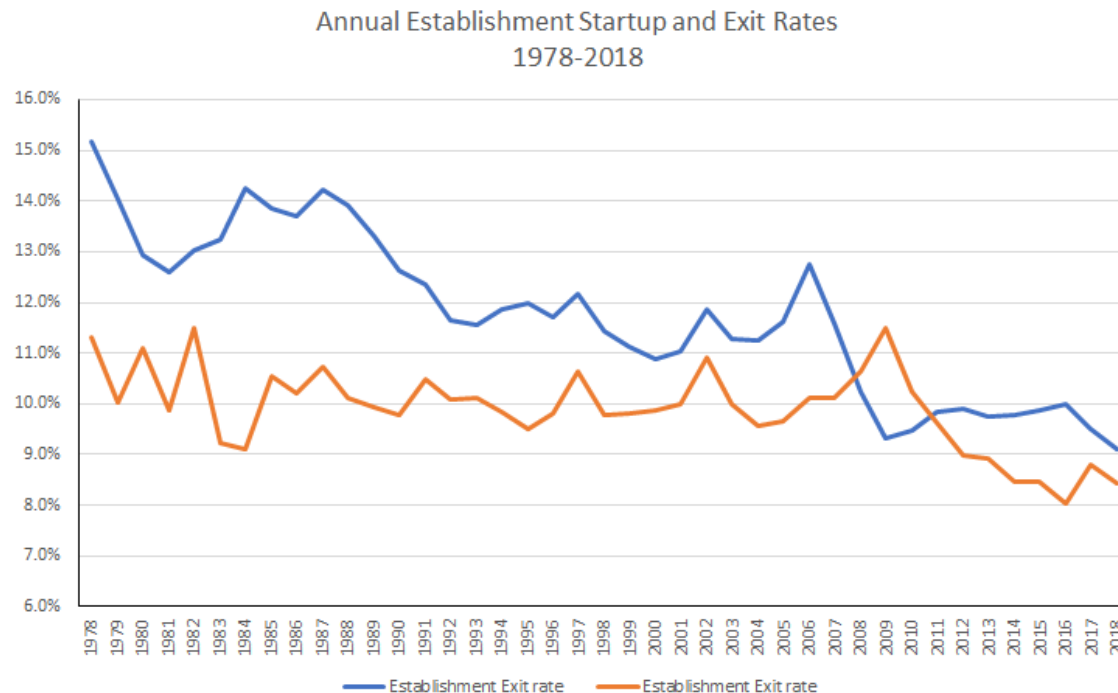
- . . . while HSR Act merger investigations have disproportionately declined



Source: Fed. Trade Comm'n & U.S. Dep't of Justice, Annual Reports to Congress (FY 1979-2019)

The reformers' argument

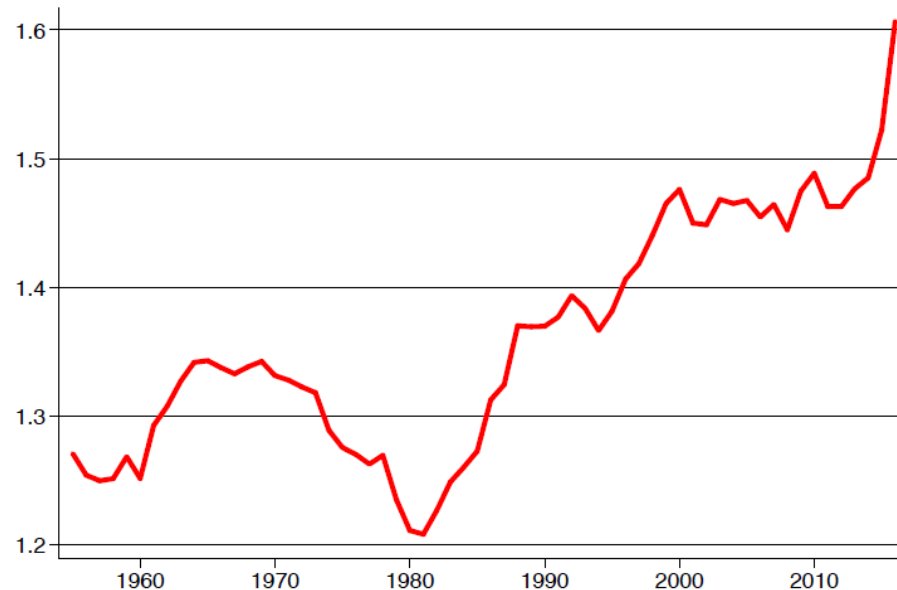
- At the same time, business start-up rates have been declining



Source: U.S. Census Bureau, Business Dynamics Statistics: Establishment Size: 1978-2018,
<https://data.census.gov/cedsci/table?q=BDTIMESERIES.BDSESIZE&tid=BDTIMESERIES.BDSESIZE&hidePreview=true>.

The reformers' argument

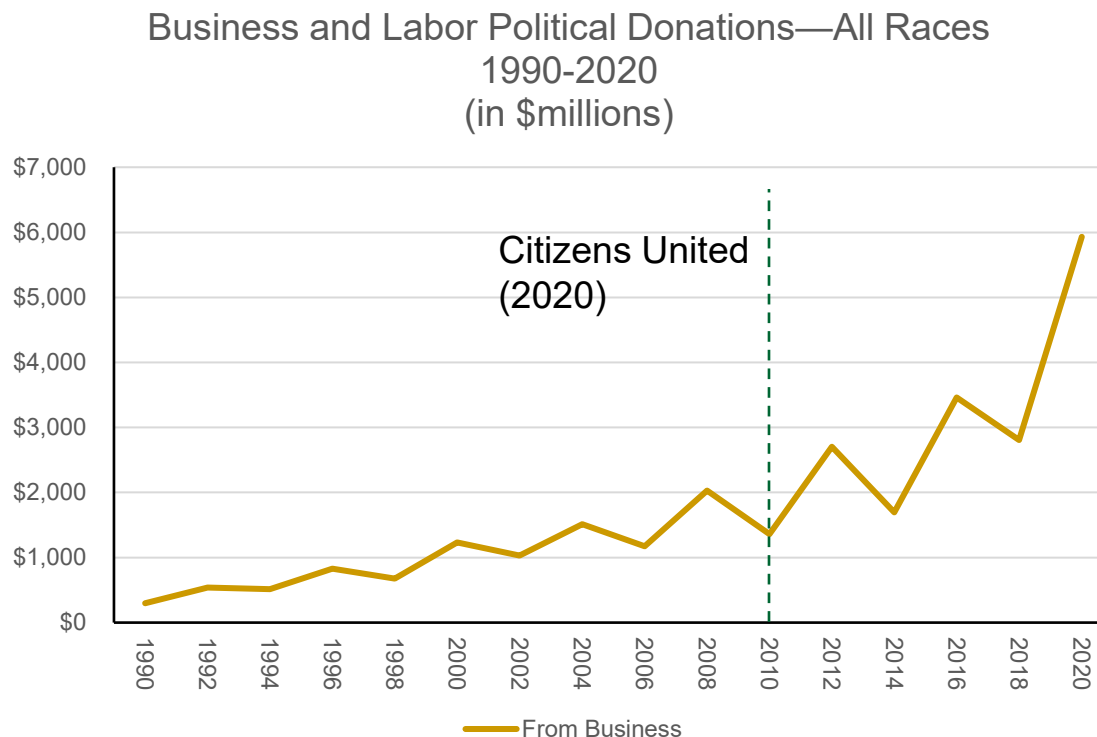
- Average markups have increased three-fold since 1980



Source: Jan De Loecker, Jan Eeckhout & Gabriel Unger, *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. Econ. 561, 571 (2020), *cited in* White House, Fact Sheet: Executive Order on Promoting Competition in the American Economy (July 9, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/>.

The reformers' argument

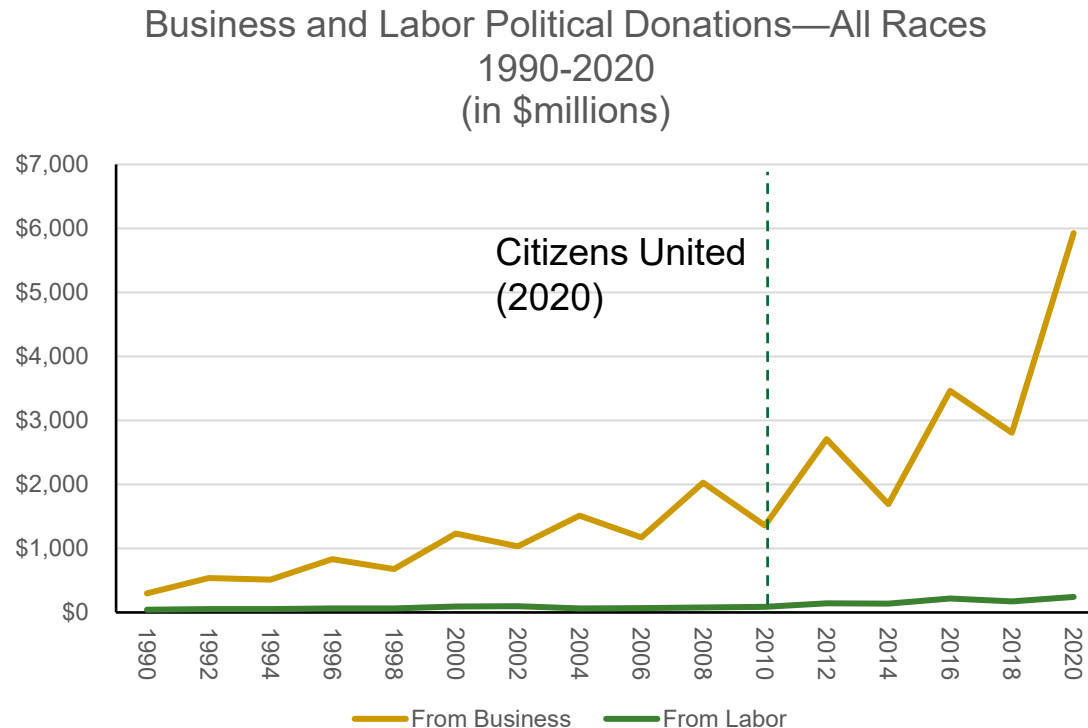
- Corporations are becoming more politically powerful, increasing their political campaign spending . . .



Source: Business-Labor-Ideology Split in PAC & Individual Donations to Candidates, Parties, Super PACs and Outside Spending Groups, <https://www.opensecrets.org/elections-overview/business-labor-ideology-split>.

The reformers' argument

- . . . and dramatically outspending labor



Source: OpenSecrets.org, Business-Labor-Ideology Split in PAC & Individual Donations to Candidates, Parties, Super PACs and Outside Spending Groups, <https://www.opensecrets.org/elections-overview/business-labor-ideology-split>.

The reformers' argument

- Bottom line:

*The antitrust laws (along with many other laws)
need to be reformed*

- Merger antitrust law is a focus of these criticisms since critics believe that merger antitrust law—whether through judicial decisions or prosecutorial elections—failed to stop many mergers and acquisitions that are contributing to the perceived problems

Modern critiques of merger antitrust law

- There are two fundamentally different critiques of modern antitrust law—
 1. The progressive critique
 2. The Neo-Brandeisian antimonopoly movement

The progressive critique

■ Basic ideas¹

1. Accepts the consumer welfare standard broadened to include suppliers (especially labor)
2. Assesses anticompetitive effect by comparing consumer welfare outcomes with the challenged conduct against outcomes in the “but for” world where the challenged conduct is prohibited
3. Views historical enforcement outcomes as failing to identify and so permitting too many anticompetitive mergers and other types of anticompetitive conduct
4. Believes that market power is typically durable and that markets do not adjust quickly—if at all—to eliminate market power
5. Views the social harm of underenforcement of the antitrust laws to be greater than the social cost of overenforcement
6. Would create presumptions to make prima facie proof of anticompetitive effect easier
7. Very skeptical of any downward pricing pressure defenses to a prima facie case of anticompetitive effect
8. Very demanding in accepting consent decrees to negate anticompetitive harm

¹ Progressives come in many varieties. These appear to me to represent the core beliefs of progressives generally.

The progressive critique

- Implications for merger antitrust law and enforcement
 1. Would continue to focus on outcomes for consumers
 2. Would also focus on outcomes for suppliers (especially labor)
 - Unclear how progressives would balance consumer benefits from lower prices resulting from lower labor costs
 3. Probably would retain judicial tests for market definition
 - But where direct evidence of anticompetitive effects is available (most likely in consummated transactions), would not require rigorous proof of market definition
 4. Would lower thresholds for challenging horizontal and vertical mergers
 5. Would lower thresholds for challenging acquisitions of actual potential competitors and “nascent” competitors
 6. Would lower standards for finding acquisitions by monopolists violate Section 2
 7. Would likely shift the burden of proof to merging parties where the acquiring firm is sufficiently large (“superfirms”)
 - That is, merging parties would bear the burden of proving that the transaction is not anticompetitive

The progressive critique

- Implications for merger antitrust law and enforcement
 - 8. Would continue—and probably increase—hostility to defenses that offset anticompetitive effect
 - 9. Would continue practice of accepting consent decree to “fix” problem
 - BUT would impose a much heavily burden on the parties to prove that the “fix” will in fact negate the anticompetitive concerns, and
 - Would include provisions in consent decrees to make it easier for the government to obtain modifications if the agency concluded after the fact that the original relief did not completely negate the competitive problem

The Neo-Brandeisian “antimonopoly movement”

■ Lina Khan’s five principles¹

1. “Antimonopoly is a key tool and philosophical underpinning for structuring society on a democratic foundation”
 - A functioning democracy depends on checking the political power that comes from private concentrations of economic power
2. “Antimonopoly is more than antitrust”
 - Antitrust law is just one tool in the antimonopoly toolbox
 - Other tools include, for example, affirmative economic regulation, tax policy, federal spending, trade policy, securities regulation, and consumer protection rules
3. “Antimonopoly does not mean ‘big is bad’”
 - Because of economies of scale or scope or network effects, some industries tend naturally to monopoly
 - In such cases, the answer is not to break these firms up, but to design a system of public regulation that
 - Prevents the executives who manage this monopoly from exploiting their power, *and*
 - Creates the right incentives to ensure that companies provide the best value for customers

¹ Lina Khan, *The New Brandeis Movement: America’s Antimonopoly Debate*, 9 J. Eur. Competition L. & Prac. 131 (2018). The five principles are verbatim from the article. The commentary is largely my interpretation. Khan is now Chair of the Federal Trade Commission. She has the strong support of at least one and perhaps both of the other Democrat-appointed commissioners.

The Neo-Brandeisian “antimonopoly movement”

■ Lina Khan’s five principles

4. “Antimonopoly must focus on structures and processes of competition, not outcomes”

- The antitrust laws should focus on creating and maintaining a *competitive process*, which in turn will produce just outcomes
 - WDC: This is a very Rawlsian perspective
- A competitive process requires atomistically structured markets
- Focusing on *outcomes* (such as consumer welfare) is fundamentally wrong
 - Cannot specify which outcome is the “right” (just) outcome (that is, cannot identify the proper social welfare function)
 - Cannot reliably identify the relevant outcomes in the real world or predict them in the but-for world

5. “There are no such things as market ‘forces’”

- Markets are structured by law and policy, not economic “natural forces”
- The legal regime could, for example, limit the size of firms—and hence their dominance in the marketplace—regardless of economies of scale or scope or network effects

The key driver for the Neo-Brandeisian approach is the elimination of significant political and economic power by firms in the economy—this focuses on maintaining competitive structures and processes, not competitive market outcomes

The antimonopoly movement deconstructed

■ Premises

1. The democracy premise
2. The economic premise
3. The individual freedom premise
4. Line drawing

The antimonopoly movement deconstructed¹

■ Premises

1. The democracy premise

- A functioning democracy depends on checking private political power
- Private concentrations of economic power create political power and undermine democracy
- Enormous corporations, in particular, wield political power through a variety of means, including lobbying, financing elections, staffing government, and funding research
- Pursuing democratic values sometimes can require some sacrifice of economic efficiency and consumer welfare

2. The economic premise

- The competitive process provides the lowest prices, greatest output, highest quality, largest consumer choice, and highest rate of technological innovation
- The competitive process also yields a fair and equitable distribution of surplus between consumers and producers and of profits among large and small firms
- The competitive process depends on absence of private individual or collective concentrations of economic power

¹ A *caution*: Proponents of the Neo-Brandeisian antimonopoly movement are not completely homogeneous in their philosophies or policy prescriptions. These slides are my effort to distill the movement's central tenets recognizing that there remains considerable room for interpretation, especially in the policy prescriptions.

The antimonopoly movement deconstructed

■ Premises

3. The individual freedom premise

- An atomistic economy provides—
 - Consumers with the maximum freedom to choose what products and services to buy and the suppliers from whom they deal
 - Workers with the maximum freedom to choose with whom to work and under what conditions and to earn a just wage
 - Small business (including new entrants) the maximum freedom to compete and innovate and to earn fair profits
- Private concentrations of economic power limit this freedom
- Maximizing individual freedom sometimes can require some sacrifice of economic efficiency and consumer welfare

4. Line drawing

- In principle, there should be a line that determines when private concentrations of economic power become unacceptable
- In practice, wherever the line, some concentrations of economic power—including some in the hands of individual “superfirms”—are so over the line that they are readily identifiable
- So deal with the egregious cases first and worry about line drawing and close cases later

The antimonopoly movement deconstructed

- Implications for merger antitrust law and enforcement
 - The standard of legality
 - The focus should be on market structure:
 - Not on performance:
 - Market definition
 - Markets do not need to be identified rigorously—simple (noneconomic) tests akin to the *Brown Shoe* approach are sufficient to identify economic concentrations of power and dominant firms
 - In particular, the hypothetical monopolist test should be discarded
 - Much too narrow in focus: Only attempts to determine if firms can profitably increase price
 - Costly yet unreliable to implement in practice
 - Often determines the outcome of merger antitrust litigation
 - Economic concentration
 - Five meaningful firms in an industry is a lower bound for economic concentration for enforcement purposes now (although the lower bound may be increased in the future as the most egregious cases are remediated)
 - Modern entrenchment
 - “Entrenched” dominant firms with durable near-monopoly positions—think the high tech MAMAA firms (Microsoft, Alphabet, Meta, Amazon, and Apple)—should be prohibited from acquiring any business, assets, or technology that has the potential of further entrenching the firm

The antimonopoly movement deconstructed

- Horizontal mergers
 - At a minimum, 5-to-4 mergers should be unlawful and perhaps even 6-to-5 mergers
- Potential competition
 - The time horizon for evaluating potential competition should be the foreseeable future
 - Dominant firms and the largest firms in a concentrated industry should be prohibited from acquiring either—
 - Actual potential competitors that have some prospect now or in the future indicated some interest in entering (although not necessarily
 - Nascent competitors
- Vertical mergers
 - Anticompetitive when the merger will enable the combined firm to deny or anticompetitively price an important input or output (such as a distribution channel) to competitors
 - Likely that the *incentive* of the combined firm to foreclose or raise rivals' costs—an essential element under the consumer welfare standard—would not be relevant
- Conglomerate mergers
 - Anticompetitive when the merger creates a sufficiently economically or politically powerful firm, regardless of consumer effects
 - Would create a new category of violation prohibiting “entrenched” dominant firms (especially in the high tech industry) from acquiring any business or assets that have the potential of further entrenching the firm

The antimonopoly movement deconstructed

□ Efficiencies

- Likely viewed as anticompetitive if they give the combined firm a competitive advantage over rivals and enable it to achieve or maintain sufficient economic or political power
- Likely view labor reductions as anticompetitive—and in any event, would not be viewed as a cognizable efficiency—even if the labor reductions resulted from eliminating duplicative positions and the cost savings were passed onto customers

A Concluding Thought on the Courts

Will the courts act as a brake on reform?

- Strong judicial precedent reinforces the current “consumer welfare” approach
 - Especially true in the D.C. Circuit with respect to mergers
 - The Areeda & Hovenkamp treatise—a book that almost defines the current approach—is by far the principal nonjudicial authority cited by the courts
 - The Neo-Brandeisian reform movement have nothing comparable
- Generally a “conservative” bench
 - Almost all judges have grown up in the current antitrust regime
 - 6 of 9 (66.6%) Supreme Court justices were appointed by Republican presidents
 - 95 of 179 (53.0%) federal court of appeals judges were appointed by Republican presidents
 - 307 of 679 (45.2%) district court judges were appointed by Republican presidents

Will the courts act as a brake?

- Most importantly, the Supreme Court is conservative with respect to antitrust
 - At least four justices are interested in antitrust cases and would be likely to vote for cert with respect to any significant doctrinal movement in the lower courts (including in 1292(b) appeals)
 - Could easily see six or more justices reaffirming the traditional approach
 - *FTC v. AMG Capital* (June 21, 2021) (9-0): FTC Act § 13(b) does not authorize FTC to seek monetary relief
 - *NCAA v. Alston* (Apr. 22, 2021) (9-0): Affirming judgment for college players in challenge to NCAA compensation restrictions using the traditional approach
 - Conservative majority could grant cert and likely overturn any FTC rulemaking under Section 5 that departs materially from the current case law as contrary to the “non-delegation” or “major questions” doctrines

CLASS 4 SLIDES

Unit 4. The DOJ/FTC Merger Review Process

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Merger Antitrust Law
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Topics

- Inquiry risk: HSR Act merger reviews
- Premerger notification
- Preparing for an investigation
- Initial waiting period investigations
- Second request investigations
- DOJ/FTC merger review outcomes

Inquiry Risk: HSR Merger Reviews

Recall the three types of antitrust risks

1. Inquiry risk

- The risk that legality of the transaction will be put in issue

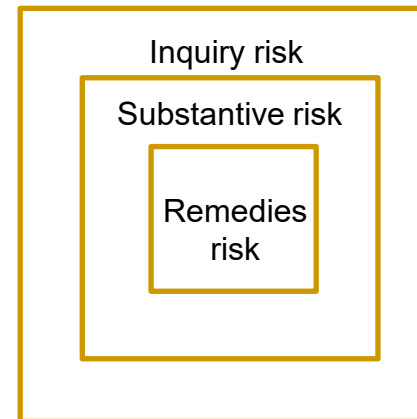
2. Substantive risk

- The risk that the transaction is anticompetitive and hence unlawful

3. Remedies risk

- The risk that the transaction will be blocked or restructured

Risks are nested



Inquiry risk

- There are two fundamental types of inquiry risk
 1. The risk of an HSR merger review
 2. The risk of a merger antitrust litigation

In this unit, we will examine HSR merger review risk
In Unit 6, we will examine merger litigation risk

Framing inquiry risk

- There are two factors to consider in assessing incentive risk—
 1. Does the putative challenger have the *means* to initiate an inquiry?
 2. Does the putative challenger have the incentive to initiate an inquiry?
-

1. The means: Two potential means—
 - a. The ability to initiate a precomplaint investigation
 - b. The ability to initiate litigation
2. The incentive calculus: Three questions—
 - a. What is the reward/payoff to success?
 - b. What is the probability of success?
 - c. What is the cost of raising the issue?

Federal enforcement agencies

■ *Ability*: Causes of action and forums

□ DOJ

- Injunctive relief under Clayton Act § 15 in federal district court
- Treble damages under Clayton Act § 4A in federal district court for injuries (overcharges) to federal agencies

□ FTC

- Permanent injunctive relief under Clayton Act § 11 in an FTC administrative adjudicative proceeding
- Preliminary and permanent injunctive relief under FTC Act § 13(b) in federal district court
 - Only a federal court may issue a preliminary injunction

■ *Incentive*: The DOJ/FTC are by far the most likely challengers

- Both charged with enforcing Section 7 of the Clayton Act
- Are large, experienced in merger antitrust enforcement, and well-funded
- Have the benefit of the HSR Act—
 - Premerger reporting
 - Waiting period before merger can be consummated
 - Precomplaint investigation tools
- Have successful litigation experience
- Do not have to show threatened or actual injury to obtain injunctive relief

The Premerger Notification Process

HSR Act

■ Hart-Scott-Rodino Act¹

- Enacted in 1976 and implemented in 1978
- Applies to large mergers, acquisitions and joint ventures
- Imposes reporting and waiting period requirements
 1. *Preclosing reporting* to both DOJ and FTC by each transacting party
 2. *Post-filing waiting period* before parties can consummate transaction
- Authorizes investigating agency to obtain additional information and documents from parties during waiting period through a *second request*
- Designed to alert DOJ/FTC to pending transactions to permit them to investigate—and, if necessary, challenge—a transaction prior to closing
 - *Idea*: Much more effective and efficient to block or fix anticompetitive deal prior to closing than to try to remediate it after closing
- Not jurisdictional: Agencies can review and challenge transactions—
 - Falling below reporting thresholds,
 - Exempt from HSR reporting requirements, *or*
 - “Cleared” in a HSR merger review—no immunity attaches to a transaction that has successfully gone through a HSR merger review

¹ Clayton Act § 7A, 15 U.S.C. § 18a.

Basic prohibition

■ Section 7A(a)

[N]o person shall acquire, directly or indirectly, any voting securities or assets of any other person, unless both persons (or in the case of a tender offer, the acquiring person) **file notification** . . . and the **waiting period** . . . has expired

- A reportable transaction is one that—
 1. Involves the **acquisition** of **voting securities** or **assets**
 2. Satisfies the **dollar thresholds** for prima facie reportability
 3. Does not fall into one of the **exemptions** provided by the HSR Act or implemented by the HSR Rules
- Dollar values are adjusted annually for inflation

Acquisition of voting securities or assets

- The HSR Act applies only to acquisitions of *voting securities* or *assets*
- “Voting securities”
 - “[S]ecurities which at present or upon conversion entitle the owner or holder thereof to vote for the election of directors of the issuer”¹
- “Assets”
 - No special definition
 - The acquisition of a 50% or greater ownership interest in a non-corporate entity (such as a partnership or LLC) is regarded as an acquisition of the entity’s underlying assets for HSR Act purposes
 - An exclusive license is regarded as an asset
- “Acquisition”
 - Does not require a formal transfer of legal title
 - Sufficient to obtain a “beneficial interest” in the underlying voting securities or assets
 - What is “beneficial interest”?
 - How can we tell if it has been transferred prior to the transfer of legal title?

¹ 16 C.F.R. § 801.1(f)(1)(i).

Prima facie reportability¹

Size of transaction*	Prima Facie Reportability		
Up to and including \$101.0 million	Not reportable		
Above \$101.0 million up to and including \$403.9 million	Reportable if :		
	(1) satisfies the “size of person” test, and		
	(2) no exemption applies		
	Size of person test		
	Acquiring person		Acquired person
	\$202.0 million (in total assets or annual net sales)	and	\$20.2 million (in total assets or annual net sales of a person engaged in manufacturing)
	Or		
	\$202.0 million (in total assets or annual net sales)	and	\$20.2 million (in total assets of a person not engaged in manufacturing)
	Or		
	\$20.2 million (in total assets or annual net sales)	and	\$202.0 million (in total assets or annual net sales)
In excess of \$403.9 million	Reportable absent an exemption		

* Based on the value of voting securities and assets the acquiring person will hold as a result of the acquisition, including the value of any previously acquired voting securities.

¹ See Revised Jurisdictional Thresholds for Section 7A of the Clayton Act, 87 Fed. Reg. 3541 (Jan. 24, 2022) (effective Feb. 23, 2022).

Prima facie reportability

- Simple rule

If the acquiring person will hold **\$101.0 million** or more of the voting securities or assets of the acquired person, then the acquisition is likely reportable absent an exemption

- A transaction that satisfies the dollar thresholds is called ***prima facie reportable***
- Every year the dollar threshold will be adjusted for inflation

Selected exemptions

■ Intraperson

- Acquired and acquired person are the same

■ Investment

1. Hold no more than 10% of target's outstanding voting securities
 - 15% for certain institutional investors
2. Acquirer must have a purely passive investment intention
 - Any membership on the board of directors or other involvement in the management of the company (other than voting shares) voids exemption

■ Convertible voting securities

- Acquired securities have no present voting rights

■ Acquisitions of non-U.S. assets

- Must not generate sales in or into the U.S. of more than \$101.0 million

■ Acquisitions of non-U.S. voting securities by non-U.S. persons that either—

1. Do not confer control over the target, or
2. Do not involve assets in the U.S., or sales in or into the U.S., over \$101.0 million

Notification thresholds

- An otherwise reportable transaction is not subject to the reporting and waiting period requirements of the HSR Act if—
 1. The reporting and waiting period requirements were satisfied within the last five years for a prior acquisition, *and*
 2. The pending acquisition will not cause the acquiring person to cross a notification threshold

Notification thresholds ¹
\$101.0 million
\$202.0 million
\$1.0098 billion
25% of the voting securities if their value exceeds \$2.0196 billion
50% of the voting securities if their value exceeds \$101.0 million

¹ See Revised Jurisdictional Thresholds for Section 7A of the Clayton Act, 87 Fed. Reg. 3541 (Jan. 24, 2022) (effective Feb. 23, 2022).

HSR Act filing

- Uses a prescribed form: Requires no—
 - Market definition
 - Calculation of market shares or market concentration statistics
 - Presentation of any antitrust analysis or defense
- Both the acquiring and acquired persons must submit their own filing
- Key information required:
 1. Transaction documents (e.g., stock purchase agreement)
 2. Annual reports and financial statements
 3. Revenues by North American Industry Classification System (NAICS) codes
 4. Corporate structure information
 - Majority-owned subsidiaries
 - Significant minority shareholders
 - Significant minority shareholdings
 5. “4(c)” and “4(d)” documents ←

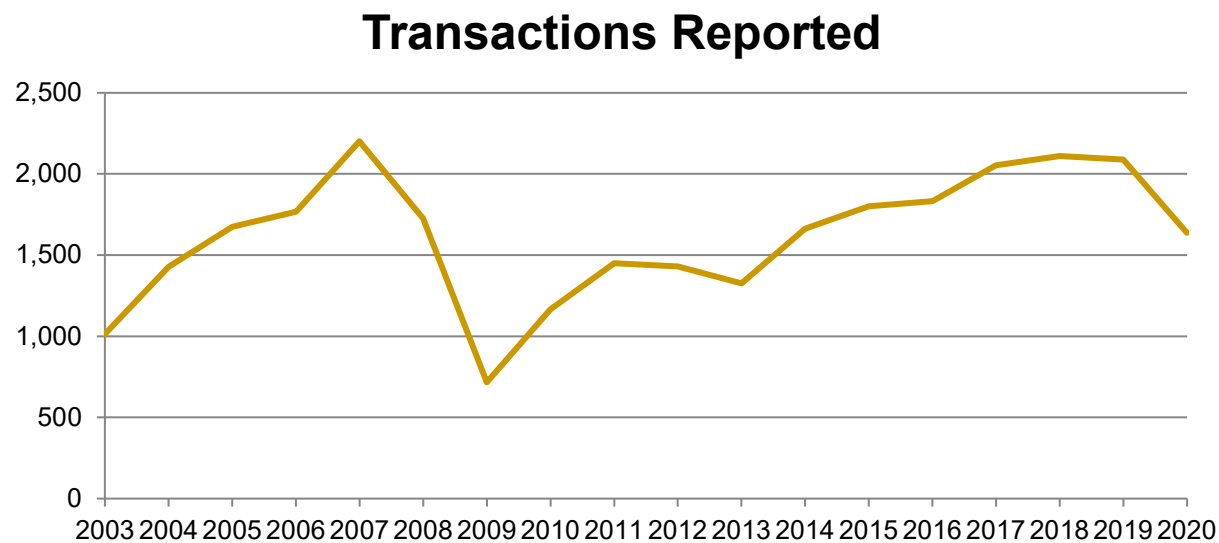
These are the only parts of the filing that really matter

HSR Act filing

■ 4(c) and 4(d) documents

- 4(c) documents: four requirements—
 1. Studies, surveys, analyses or reports
 2. Prepared by or for officers or directors of the company (or any entities it controls)
 3. That analyze the transaction
 4. With respect to markets, market shares, competition, competitors, potential for sales growth, or expansion into product or geographic markets
- 4(d) documents: three types—
 1. Confidential Information Memoranda (“CIM”)
 2. Third party advisor documents
 3. Synergy and efficiency documents
- Failure to provide all 4(c) and 4(d) documents
 - Makes the HSR filing ineffective, so that the waiting period never started
 - Usually discovered by investigating agency in the document production in a second request
 - Agencies have required parties to refile and go through the entire process (including a second request)
 - Subjects the parties to civil penalties (fines) if they close their transaction without making a corrective filing and observing the required waiting period

HSR Act notifications



Source: Fed. Trade Comm'n & U.S. Dept. of Justice, Hart-Scott-Rodino Annual Report Fiscal Year 2020, at App. A.

Statutory waiting periods

■ General rules

- ❑ Cannot close a reportable transaction until the waiting period is over
- ❑ The duration of the waiting period is prescribed by the HSR Act

■ Initial waiting period

- ❑ 30 calendar days generally
- ❑ 15 calendar days in the case of—
 - a cash tender offer, *or*
 - acquisitions under § 363(b) of bankruptcy code

■ Extension of waiting period

- ❑ Waiting period extended by issuance of a second request in the initial waiting period
- ❑ Waiting period extends through—
 - Compliance by all parties with their respective second requests
 - PLUS *final waiting period* of 30 calendar days
 - ❑ 10 calendar days in case of a cash tender offer

■ Investigating agency may grant *early termination* of a waiting period at any time

HSR Act violations

■ HSR Act prohibition

“[N]o person shall acquire, directly or indirectly, any voting securities or assets of any other person” in a reportable transaction without observing the filing and waiting period requirements¹

- Recall that the HSR regulations provide that a person holds voting securities or assets when it has a “beneficial interest” in them²

■ Two basic types of violations

1. *Failure to file* a reportable transaction and nonetheless closing the transaction
2. “*Gun jumping*”: Acquiring a beneficial interest in the target’s assets or voting securities prior to the expiration of the HSR Act waiting period

■ Violations can be expensive

- \$46,517 per day for every day of the violation—Equals \$17.0 million per year³
- Also can put the violator on the radar screen of the agencies for future acquisitions

¹ 15 U.S.C. § 18a(a).

² 16 C.F.R. § 801.1(c).

³ 87 Fed. Reg. 1070 (Jan. 10, 2022) (increasing civil penalty from \$43,792 to \$46,517 per day effective January 10, 2022, pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, Pub. L. No. 114–74, § 701, 129 Stat. 599 (2015) (requiring a catch-up CPI inflation adjustment from the date of the statute’s enactment)).

Preparing for an Investigation

Build your complete defense

- Need to do this prior to the first contact with the investigating staff
 1. Want to make the strongest defense possible at the first substantive encounter with the investigating staff
 2. Do not want to be surprised later by a new fact that undermines the defense
 3. Need buy-in from the client
 - They will eventually have to make the defense themselves before the staff
 4. Need buy-in from the merger partner
 - They too will eventually have to make the defense themselves before the staff

Identify the “face of the deal”

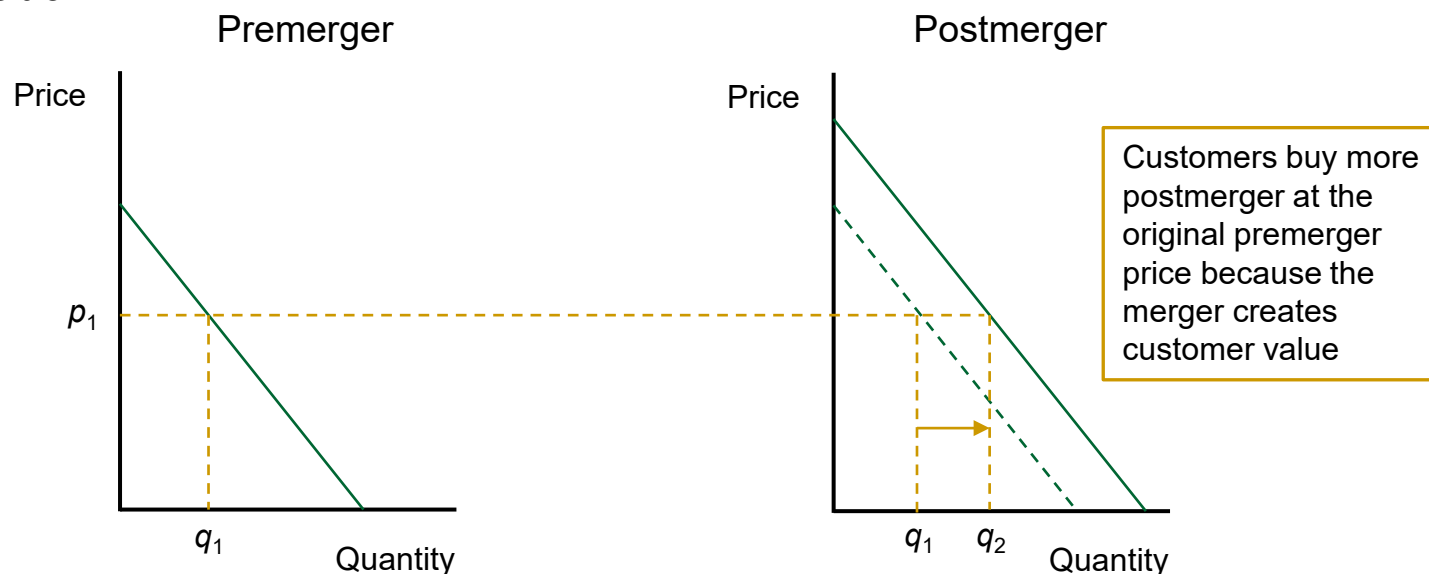
- Which business representative is going to be the most effective in—
 1. Marshalling resources—especially access within the company—to defend the deal?
 2. Leading the defense team within the client?
 3. Working with the merger partner in creating a strong, consistent defense?
 4. Advocating the defense of the deal before the agency?
- Start working with this individual as soon as possible
 - Have to teach them the operational principles of merger antitrust law
 - Need to be involved in every step of building the defense—they need to “own” the defense

Work with the merger partner

- Critical for three reasons—
 1. Need to understand the evidence that is in the hands of the merger partner
 2. Need to ensure that both merging parties are making consistent arguments in defense of the transaction
 3. Need to work with the merger partner on the rollout of the deal to neutralize customer opposition and gain customer support
- Agree in the purchase agreement that the parties will—
 1. Cooperate in the sharing of information
 - Highly confidential information may be shared on an “outside counsel only” basis
 2. Cooperate in the defense of the transaction
 - With the buyer usually taking the lead and making all final strategic decisions
 3. Attend each other’s meetings with the investigating agency
- Agencies accept that joint defense meetings between merging parties are protected under the “*common interest*” privilege
- Maneuver to get and begin to prepare the best witnesses from the merger partner

Prepare and implement a customer rollout

- Work with the merging parties to develop and implement a plan to reach out to customers to—
 - Neutralize customer complaints
 - Maximize customer support
- Create a “win-win” argument—
 1. The combined firm will make lots of money
 2. By *shifting the demand curve to the right* by creating a better *customer value proposition*:



Prepare and implement a customer rollout

- Argument must work for customers of both the buyer *and* the target
 - *Remember:* The seller's customers are usually the more difficult to convince that the deal will be good for them
 - They had the opportunity to purchase from the buyer but instead chose to purchase from the target
- Work with the client and the merger partner to find the best people within the company to make the sales pitch for the deal to customers

Prepare and implement a customer rollout

- Form of customer pitch:

“You probably have heard about our deal with Company X. We have very excited about it. We think that it is great for our company, great for our shareholders, and great for our customers. You are one of our most valued customers and we hope that you are as excited by benefits the deal will provide to you as we are.

[FILL IN CUSTOMER BENEFITS]

Do you have any questions or concerns about the deal? We would really like to know what they are so that we can address them.

Initial Waiting Period Investigations

Preliminaries

- Parties must file their respective HSR forms with both the DOJ and the FTC
 - Separate forms are required for each reporting person
- FTC Premerger Notification Office (PNO) review
 - Only for technical compliance on form—no review of substance
 - NB: The PNO is also responsible for providing informal interpretations of the HSR Act and implementing regulations
- Allocated to DOJ or FTC for review through the agency “clearance” process
- Responsible agency assigns to litigating section for substantive review

“Clearance”

- DOJ and FTC decide which, if either, of the agencies will do an investigation
 - This is called the clearance process
- “Liaison agreement” between DOJ and FTC prevents duplicative investigations
 - If neither DOJ nor FTC want to open a preliminary investigation—PNO grants early termination of the waiting period [Temporarily suspended as of February 4, 2021]
 - If DOJ or FTC (but not both) want to open a preliminary investigation—Requesting agency gets clearance to open investigation
 - If both DOJ and FTC want to open a preliminary investigation—Agencies negotiate to allocate the investigation based on prior experience with the industry or the merging parties (and which agency got the last contested clearance)
- Process can be fraught with strategic behavior by agencies
 - *Extreme case*: “Clearance battle” can last until the last day of the initial waiting period
 - Efforts to reform “clearance” process by allocating specific industries to specific agency have failed miserably
 - Neither agencies nor their respective congressional oversight committees want to relinquish jurisdiction over any type of merger

Initial contact by investigating staff

- Usually occurs 7-10 days after filing
- Three purposes
 1. Inform parties of the investigation and introduce the investigating staff
 2. Request that the parties provide certain information to the staff on a voluntary basis—
 - a. Most recent strategic, marketing and business plans
 - b. Internal and external market research reports for last 3 years
 - c. Product lists and product descriptions
 - d. (Perhaps) competitor lists and estimates of market shares
 - e. Customer lists of the firm's top 10-20 customers (including a contact name and telephone number)
 - The agencies do not ask for customer lists in transactions involving consumer goods sold at retail, since retail customers are not considered sufficiently sophisticated and reliable in predicting the effect of a merger on them
 3. Invite the parties to make a presentation to the staff on the competitive merits of the transaction

Strategic pointer

Make the presentation to the staff before providing the customer lists in order to—

- 1. Provide a framework for the competitive analysis, and*
- 2. Frame the questions that you want the staff to be asking customers*

Initial merits presentation

- Critical to do completely, coherently, and quickly
 1. Often a large “first mover” advantage in being the first to give the staff a systematic way to think about the transaction
 2. Well-prepared business people are the best to present
 - Agencies not impressed with “testifying” lawyers—especially outside counsel
 3. Need to anticipate and answer staff questions
 - Avoiding answers causes the staff to be more skeptical about the transaction and increases the probability of an in-depth investigation
 4. Need to clear and compelling
 - Cannot win on an argument that the staff does not understand or finds ill-supported
 5. Need to anticipate and be consistent with what the staff is likely to what the staff is likely to see in the company documents and hear from customers
 - Staff will almost always accept the customer view in the event of an inconsistency
 6. Need to do the presentation quickly
 - By the time you get the initial call from the staff, one-third of the initial waiting period will be over
 - Accordingly, must have the presentation “in the can” by the end of the first week of the initial waiting period

Initial merits presentation

- The best presentations—

1. anticipate all of the issues the staff will raise,
2. provide answers that are supported by company documents and consistent with customer perceptions, and
3. have all of the facts right

Ideally, the rest of the investigation needs to do no more than defend the analysis in the first presentation

Initial merits presentation

- Ideal structure (when the facts fit)
 1. Provide an overview of the parties and the transaction
 - Identify other jurisdictions in which the transaction is reportable
 2. Provide an overview of the industry (if the staff is not familiar with the industry)
 3. Explain the business model driving the transaction
 - The deal is procompetitive—a win-win for the company and the customers
 - “We make the most money by providing more value to customers, improving productive efficiency, and reducing costs without reducing product or service quality”
 - Essential to give a compelling reason for doing the deal that is not anticompetitive
 4. Identify the customers benefits implied by the business model
 - Customers will be better off with the transaction than without it
 - NB: Agencies give little credit in the competitive analysis to efficiencies or cost savings that are not passed along to customers
 5. Explain why market conditions would not allow the transaction to be anticompetitive in any event
 - “We could not raise price even if we wanted. Customers have alternatives to which they can turn to protect themselves in the event we try to raise price or otherwise harm them.”
 - Alternatives can be other current suppliers, firms in related lines of business that can expand their product lines, new entrants, or customer self-supply/vertical integration

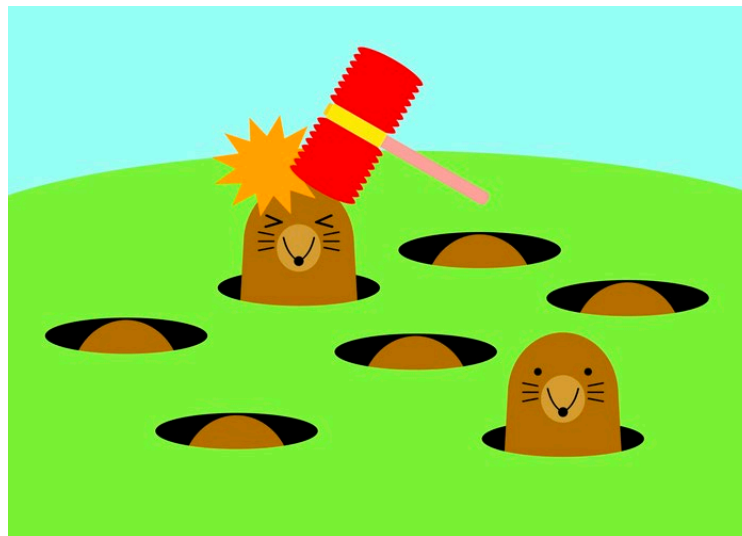
Customer/competitor interviews by staff

- Occupies the bulk of the remaining time in the initial investigation
- Customer views are given great weight
 - *Theory*: The purpose of the antitrust laws is to protect customers from competitive harm, and sophisticated customers should have a good idea of whether they will be competitively harmed by the transaction under review
 - Staff will attempt to call all of the contracts on the customer lists provided by the merging companies in response to the initial voluntary request
 - Staff often will uncritically accept customer complaints but question customer support
 - Customer reactions may differ depending on the position of the contact person
 - The CEO may take a broader and more nuanced view of the transaction than a procurement manager, who only sees the merger reducing the number of available suppliers
- Competitor conclusions are given little weight
 - *Theory*: Anticompetitive transactions are likely to benefit competitors, so competitor complaints are more likely the result of concerns about procompetitive efficiencies than anticompetitive effect
 - But competitor interviews can be useful in understanding more about the industry
 - Complaining competitors are often willing to spend considerable time educating the staff
 - Customers usually just want the staff to go away unless they strongly oppose the deal

Respond to staff questions

- Questions may arise as a result of customer and competitor interviews
- Need to anticipate and respond to these quickly
 - Likely hear from staff in the last week of the initial waiting period
 - A failure to negate any staff concerns will almost surely extend the investigation

Think of this as a serious game of Wack-A-Mole



End of the initial waiting period

■ Three options for the agency

1. Close the investigation

2. Issue a second request

■ Most important factors—

- ❑ Incriminating company documents
- ❑ Significant customer complaints
- ❑ Four or less competitors postmerger for horizontal transactions (5 → 4 deals)
 - Maybe 6 → 5 later in the Biden administration
- ❑ Merging parties are uniquely close competitors to one another (“unilateral effects”)
- ❑ Merger eliminates a “maverick,” an actual potential competitor, or a “nascent competitor”
- ❑ Obvious significant foreclosure possibilities (for vertical transactions)

NB: Any one of these factors can be sufficient to trigger a second request investigation—it does not take much

■ A second request must be authorized—

- ❑ By the assistant attorney general (typically delegated to a deputy assistant attorney general)
- ❑ By the Federal Trade Commission (typically delegated to the chairman or a commissioner)

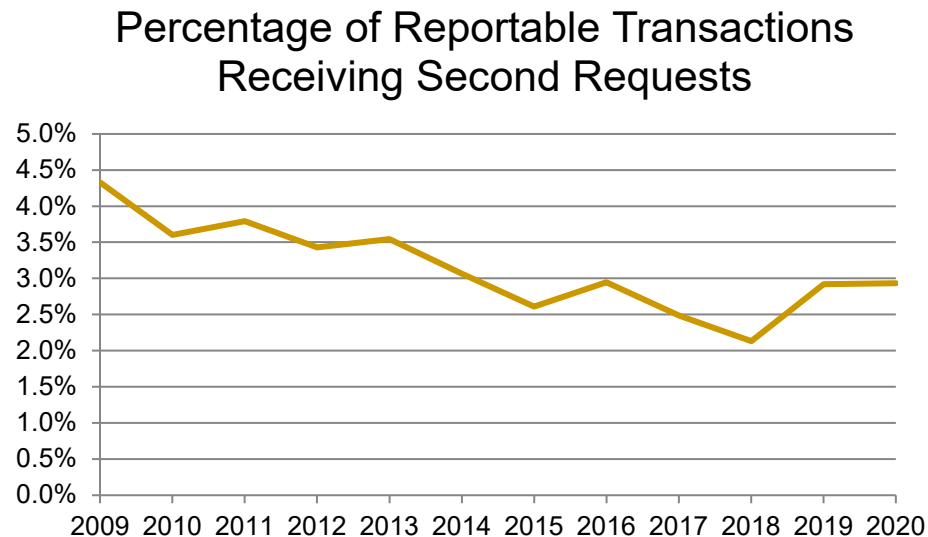
3. Convince the parties to “pull and refile” their HSR forms to restart the initial waiting period

- Typically used when the initial investigation to date indicates no problem but requires a short additional time to complete customer interviews
- The agency usually grants early termination in the middle of the second initial waiting period

Second Request Investigations

The second request

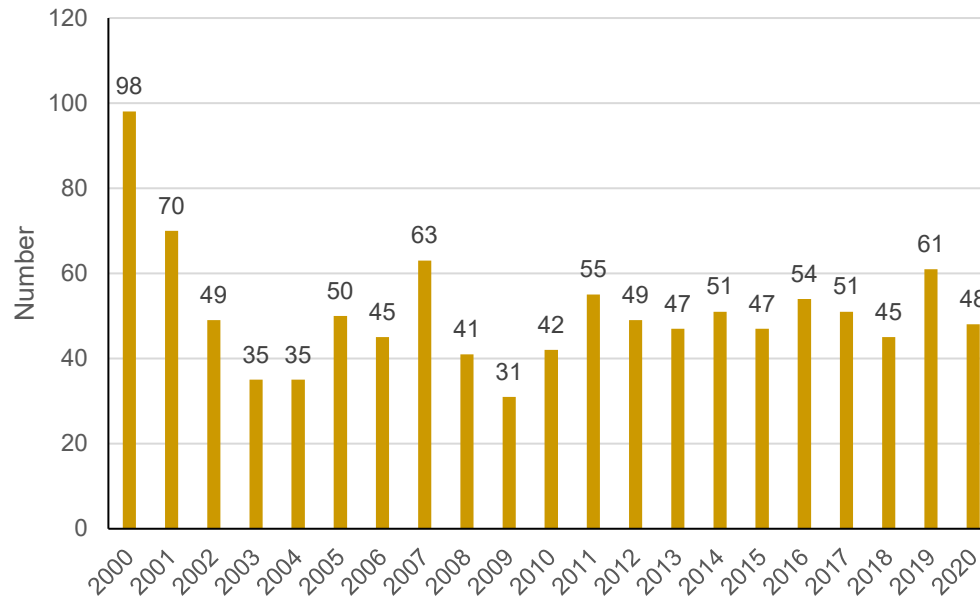
- The HSR Act authorizes investigating agency to issue one request for additional information and documentary material (a “second request”) during the initial waiting period to each reporting party
- Issuance of a second request extends waiting period until—
 - All parties comply with their respective second requests, and
 - Observe a final waiting period (usually 30 days) following compliance



Source: Fed. Trade Comm'n & U.S. Dept. of Justice, Hart-Scott-Rodino Annual Report Fiscal Year 2020, at App. A.

Total number of second request investigations

■ By year since 2000



Source: Fed. Trade Comm'n & U.S. Dept. of Justice, Hart-Scott-Rodino Annual Report Fiscal Year App. A (for FY 2010 and FY 2020).

The second request

- Blunderbuss request
 - If you can only ask once, ask for everything
 - DOJ and FTC each have “model” second requests, but typically customized with additional specifications
 - Covers all company documents, including e-mail and other electronic documents

The second request

- Typically takes 6-16 weeks to comply
 - Can cover 60-120 custodians in large multiproduct deals
 - In the past, the agencies had made meaningful efforts to reduce this number, targeting 30-35 custodians
 - BUT often condition this on a “timing agreement” and other commitments
 - Today, the agencies are making second requests more onerous to dissuade companies from doing problematic deals
 - Interrogatories, including—
 - Detailed sales data
 - Bid and win/loss data
 - Requirements for entry into the marketplace
 - Rationale for deal
 - Document requests, including—
 - Business, strategic and marketing plans
 - Pricing documents
 - Product and R&D plans
 - Documents addressing competition or competitors
 - Customer files and customer call reports
 - Non-English language documents must be translated into English

Second request investigations

- Depositions of business representatives of parties
 - Often 3-5 employees for each party
 - Typically includes the senior person knowledgeable about U.S. sales and competition for U.S. customers
 - Can include sales representatives for key accounts
 - R&D directors (if R&D is important to defense)
 - In Washington
 - Attendance can be compelled
 - Civil Investigative Demand (CID) by the DOJ
 - Subpoena by the FTC
 - Transcribed and under oath
 - Typically each lasts 6-8 hours
- Documents and testimony from customers and competitors
 - Adverse testimony will be memorialized in a sworn affidavit
- Expert economic analysis
 - By experts retained by the parties
 - By agency experts
 - Or, in investigations where litigation is foreseeable, by outside experts retained by agency

Final waiting period

■ Timing

- ❑ Begins when all parties have submitted proper second request responses
 - *Exception:* In open market transactions, timing depends only on when the acquiring person complies (to avoid delaying tactics by the target in hostile transactions)
- ❑ Ends 30 calendar days later
 - 10 days in a cash tender offer

■ The final waiting period is often too short to complete the investigation given the time it takes—

- ❑ For the investigating staff to analyze information and documents submitted by the parties in response to their second requests
- ❑ For the investigating staff to finalize its analysis and recommendation, *and*
- ❑ For agency management to review the staff's recommendation and make a decision on the disposition of the investigation
- ❑ *Conclusion:* The final waiting period provides too little time for the agency to make an informed decision

Timing agreements

■ Timing agreements in second request investigations

- The merging parties can—and typically do—voluntarily commit to give the agency additional time to complete the investigation by executing a contractual timing agreement
 - Commits the parties not to close the transaction for some period of time after the expiration of the HSR Act waiting period
 - Usually in the parties' interest, since the agency will sue to block the transaction if it cannot complete its analysis
 - Provides additional time for agency to complete investigation
 - May be necessary to complete meetings to enable the merging parties to make their arguments
 - Usually better than being sued!
 - The investigating agency will sue to block the transaction if it cannot complete its analysis before the transaction closes
 - May be necessary if a consent decree is being negotiated
- Typical commitment: An additional 30-60 days beyond the end of the HSR Act waiting period
- BUT a timing commitment does not technically extend the statutory waiting period
 - Enforceable through contract or detrimental reliance, not as a violation of the HSR Act
 - Typically misunderstood by the parties and the investigating staff
 - Is acknowledged by the FTC Premerger Notification Office
 - Significant because there can be no “gun jumping” after the end of the HSR Act waiting period

The End of the Investigation

The final arguments

- Formal meetings at the end of the investigation

	DOJ	FTC
1	Investigating staff	Investigating staff
2	Section Chief & staff	Assistant Director & staff
3	Deputy Assistant Attorneys General (legal and economics)	Directors meeting (Bureau of Competition/ Bureau of Economics)
4	Assistant Attorney General	Five FTC Commissioners (meet individually)

- Numerous informal meetings can occur up the chain at the end of the investigation
- *Critical question:* How much of its analysis will the investigating staff disclose to the parties?

Merger Review Outcomes

Possible outcomes in DOJ/FTC reviews

Close investigation

- Waiting period terminates at the end of the investigation with the agency taking no enforcement action, or
- Agency grants early termination prior to normal expiration

Litigate

- DOJ: Seeks preliminary and permanent injunctive relief in federal district court
- FTC: Seeks preliminary injunctive relief in federal district court
Seeks permanent injunctive relief in administrative trial

Settle w/consent decree

- Historically, the typical resolution for problematic mergers
- DOJ: Consent decree entered by federal district court
- FTC: Consent order entered by FTC in administrative proceeding

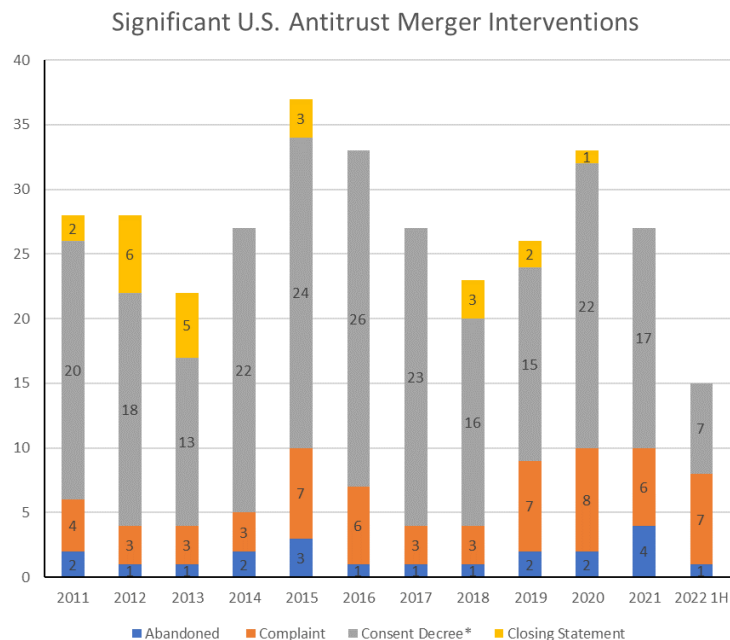
Parties terminate transaction

- Parties will not settle at the agency's ask and will not litigate, or
- Agency concludes that no settlement will resolve the agency's concerns and the parties will not litigate
 - Examples: AT&T/T-Mobile, NASDAQ/NYSE Euronext

"Fix it first"

- Merging parties restructure transaction to eliminate problematic overlap by narrowing assets to be purchased or selling assets to a third party
- Merging parties file new HSR notifications for the restructured transaction
 - HSR reports also may need to be filed for the restructured transaction
- When done to the agency's satisfaction, eliminates the need for a consent decree or other enforcement act

U.S. antitrust merger intervention outcomes



Year	Abandoned	Complaint	Consent Decree*	Closing Statement	Total
2011	2	4	20	2	28
2012	1	3	18	6	28
2013	1	3	13	5	22
2014	2	3	22		27
2015	3	7	24	3	37
2016	1	6	26		33
2017	1	3	23		27
2018	1	3	16	3	23
2019	2	7	15	2	26
2020	2	8	22	1	33
2021	4	6	17		27
2022 1H	1	7	7		15

* Includes two "fix it first" resolutions in 2012

Source: Dechert LLP, [DAMITT Q2 2022: Is Merger Enforcement Taking a Conservative Turn?](#) (July 26, 2022); Dechert LLP, [DAMITT 2018 Year in Review](#) (Jan. 24, 2019). Dechert declines a "significant" investigation as one that involves a deal that is HSR reportable for which the result of the investigation is a consent order, a complaint challenging the transaction, an official closing statement by the reviewing antitrust agency, or the abandonment of the transaction with the antitrust agency issuing a press release. It does not include an indepth second request investigation in which the agency concludes there is no antitrust concern, so in this sense a significant investigation is the same as an intervention outcome. Dechert calculates the duration of an investigation from the date of announcement to the completion of the investigation (presumably including any time necessary to negotiate a consent decree).

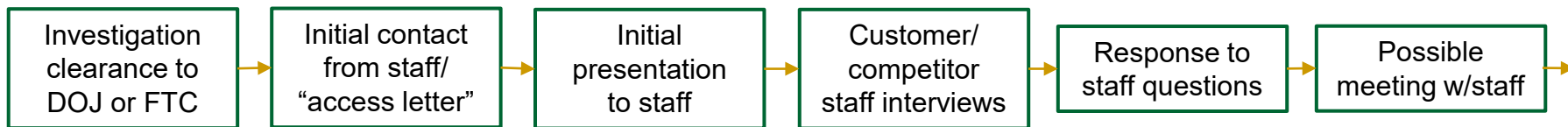
The HSR Review Process: A Summary

The HSR review process

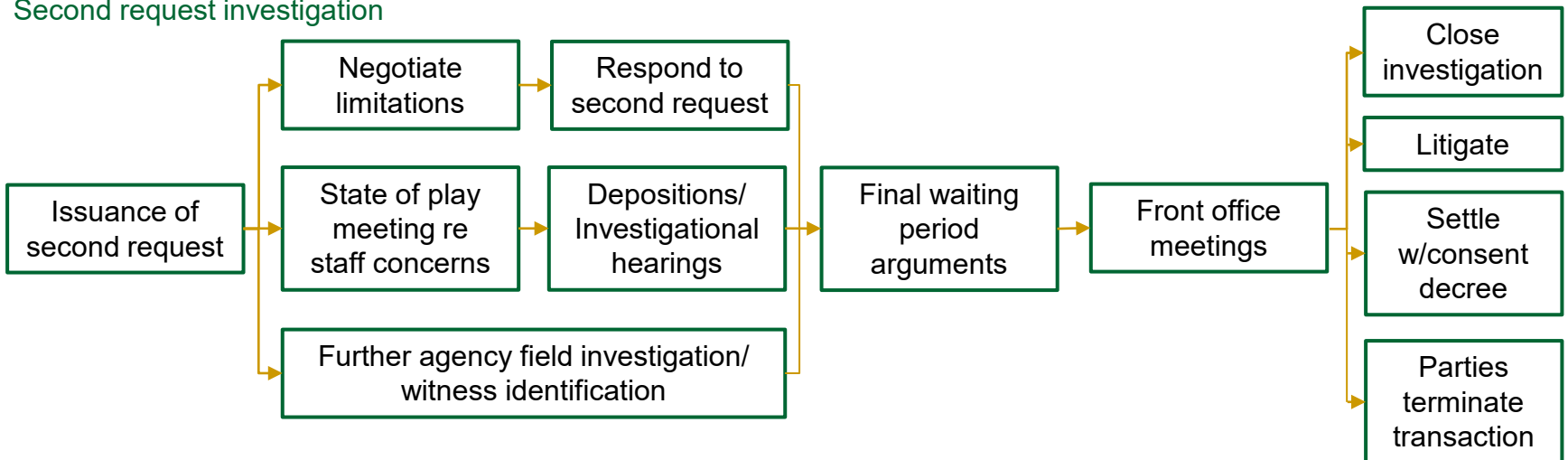
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Initial investigation

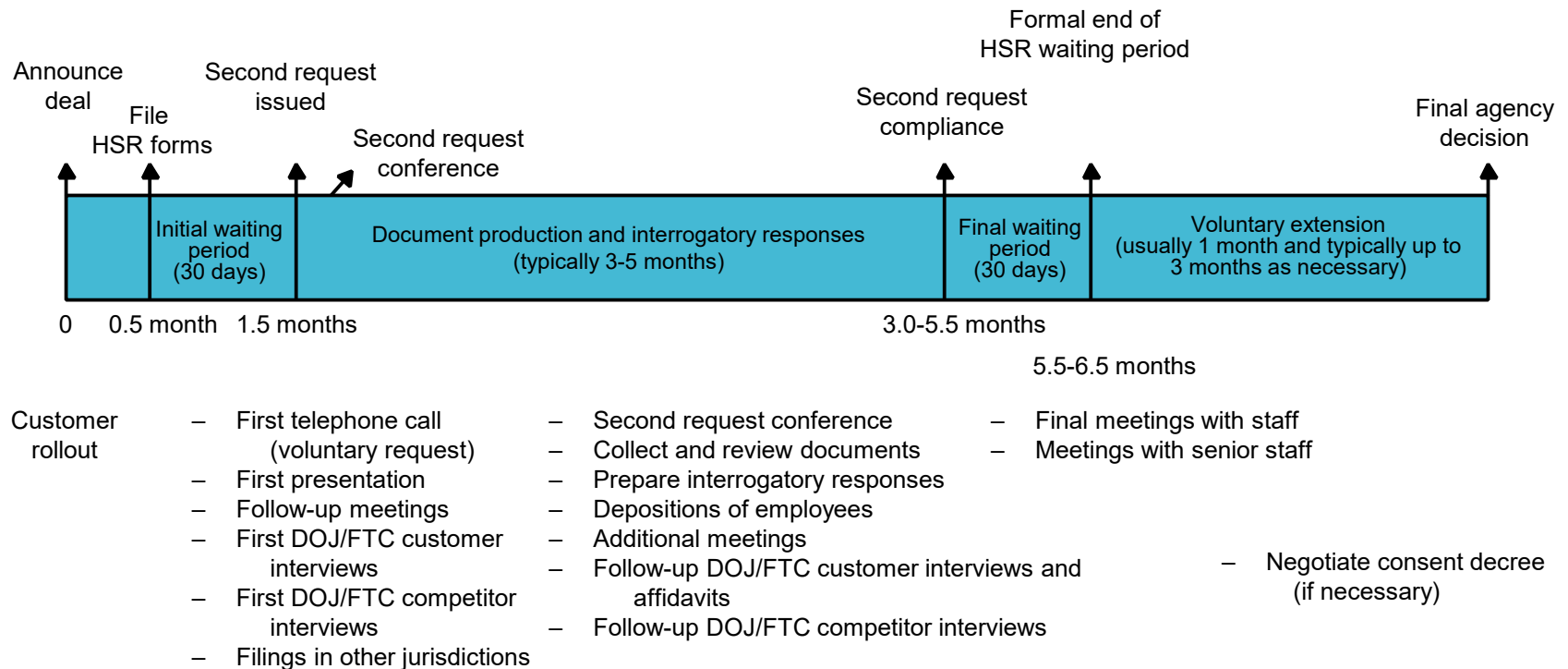


Second request investigation



The HSR Act review process

■ Typical domestic transaction



CLASS 5 SLIDES

Unit 5. Merger Antitrust Settlements

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

Topics

- Consent Decree Relief: The Basic Idea
- Some Important Legal Technicalities
- DOJ/FTC Enforcement Practice
- Consent Remedies: The Details
- Consent Remedies: The Process
- Consent Decree Violations
- “Litigating the Fix”

Possible outcomes in DOJ/FTC reviews

Close
investigation

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- Agency grants early termination prior to normal expiration

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decree

- Typical resolution for problematic mergers
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 - Examples: AT&T/T-Mobile, NASDAQ/NYSE Euronext

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- Merging parties restructure transaction to eliminate problematic overlap by narrowing assets to be purchased or selling assets to a third party
- Merging parties file new HSR notifications for the restructured transaction
 - HSR reports also may need to be filed for the restructured transaction
- When done to the agency's satisfaction, eliminates the need for a consent decree or other enforcement act

The Basic Idea

The basic idea

- There are three ways to restructure a deal to avoid a problematic antitrust overlap:
 1. *Acquire less from the seller*: Restructure the transaction with the seller so that the seller retains its side of the problematic overlap, so it never passes to the buyer
 - Report only the restructured transaction on the HSR filing—shows no overlap
 2. *“Fix it first”*: Restructure the transaction so that the one side of the problematic overlap (either the buyer or the seller) is sold to a third party *before* the buyer and seller close their main transaction
 - Report only the restructured transaction on the HSR filing—shows no overlap
 3. *Consent decree*: Restructure the transaction under a consent decree with the investigating agency to sell one side of the problematic overlap (either the buyer or seller) to a third party approved by the agency under a divestiture agreement approved by the agency *after* the buyer and seller close their main transaction
 - Report the original transaction on the HSR filing—shows the overlap
- A caution:
 - In many deals, it is not clear what overlaps, if any, the agency will find problematic
 - Consequently, Solutions 1 and 2 may be either overinclusive or underinclusive
 - The only way to find out for sure is to go through the HSR

The basic idea

- The fundamental consent decree requirement:

The divestiture buyer must preserve the level of premerger competition in the market of concern so that the putative anticompetitive effect never materializes postmerger

- Two requirements here

1. The divestiture buyer must have the ability and incentive to preserve the premerger level of competition postmerger for the foreseeable future
 - *Corollary 1*: The divestiture business must be *financially viable* in the hands of the divestiture buyer
 - *Corollary 2*: Financial viability may require the divestiture of additional assets not strictly necessary to eliminate the antitrust problem
2. The divestiture must preserve competition ab initio—there cannot even be a transitory anticompetitive effect postmerger

The divestiture buyer is said to “step into the shoes” of the divestiture seller

The basic idea

■ *Illustration: DaVita/University of Utah*¹

□ The deal

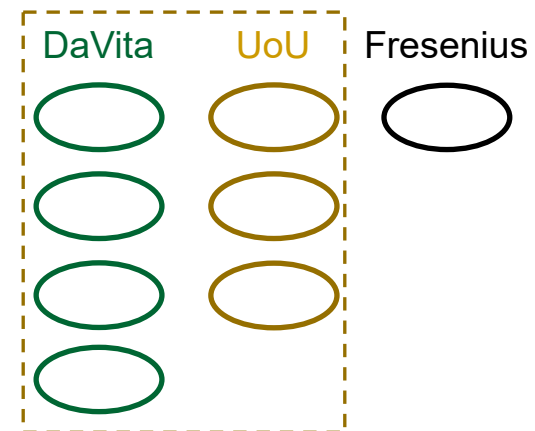
- In September 2021, DaVita, the largest operator of outpatient dialysis clinics in the United States, agreed to acquire the University of Utah's 18 dialysis clinics in and around Utah in a non-HSR reportable transaction

□ The antitrust problem

- In the greater Provo market, there were only three dialysis providers:

- DaVita: 4 clinics
- UoU: 3 clinics
- Fresenius: 1 clinic

Provo market



- Barriers to entry into dialysis clinics are very high and no new entry was likely postmerger
- The transaction would reduce the number of competitors in the Provo market from three to two (a “3 → 2 transaction”), with DaVita operating seven out of the eight clinics in the area

¹ For the consent order and related documents, see the DaVita/University of Utah case study in the Unit 5 supplemental materials.

The basic idea

- *Illustration: DaVita/University of Utah*
 - The FTC found no antitrust problems with DaVita's acquisition of the other 15 UoU clinics

The key to a consent decree is the existence of other parts of the deal that do not present antitrust problems and the separability of the parts of the deal that do

The basic idea

■ *Illustration: DaVita/University of Utah*

□ The consent decree

- The FTC and DaVita resolved the FTC's concerns at the end of the investigation through a consent decree requiring DaVita to—

- Divest the three UoU Provo clinics to Sanderling Renal Services, Inc. ("SRS"), a small but established operator of dialysis clinics nationwide but without any presence in Utah ← Requires a "buyer upfront" (standard in most cases)
- Provide transition services to SRS for up to one year ← Standard provision
- Assist SRS in hiring the employees at the divested clinics and refrain from soliciting those employees for 180 days ← Standard provision
- Prohibit DaVita from entering into or enforcing noncompete agreements with any University nephrologist ← New provision
- Prohibit DaVita from entering into any non-solicitation agreement with SRS that would prevent SRS from soliciting DaVita's employees for hire ← New provision
- Requires DaVita to obtain prior approval from the Commission for any future acquisition of any ownership interests in any dialysis clinic in Utah ← New provision

Reflects the FTC's new concerns about the effect of mergers on labor

Once the FTC provisionally accepted the consent order on October 25, 2021, the parties were free to close the main transaction. The settlement, however, required DaVita to divest the three Provo clinics to SRS within ten days of the closing of the main transaction.

Consent decree relief: The basic idea

■ Three basic divestiture consent decree paradigms

1. Divest standalone business complete with all necessary back office and other support
 - Divestiture of a legal entity—a corporation or an LLC—is desirable since all employees and contacts with the company follow the sale to the divestiture buyer
 - If the Commission is unsure whether an acceptable divestiture buyer will emerge, the Commission will insist on a “buyer upfront”—that is, it will not accept the consent decree until the Commission vets and approves the divestiture buyer and the definitive purchase agreement
 - This can delay the closing of the main transaction for several months
 - Today, buyers upfront are more the rule than the exception
2. Divest an operating business
 - Core business operations divested—Divestiture buyer to provide back office and other support
 - Agencies almost always demand an upfront buyer
3. Divest assets necessary for divestiture buyer to operate the divestiture business
 - Divestiture buyer to provide all support necessary to operate the business
 - Agencies always demand an upfront buyer

These three paradigms also apply in “fix it first” solutions

Some Important Legal Technicalities

Some important legal technicalities

1. Consent decrees are final judgments in a judicial or administrative adjudicative proceeding
 - ❑ A judicial or administrative complaint must initiate these civil proceedings
 - ❑ DOJ consent decrees are federal district court permanent injunctions
 - Violations are enforceable through civil and criminal contempt sanctions
 - ❑ FTC consent orders are administrative “cease and desist orders”
 - Violations are enforceable through federal district court action for civil penalties
 - ❑ Penalties are inflation adjusted
 - ❑ In 2022, the maximum penalty is \$46,517 per day (adjusted annually)
 - The district court will also issue an injunction to prevent future violations of the FTC consent order
 - ❑ These district court orders are enforceable through judicial contempt sanctions (criminal and civil)
 - ❑ Contempt sanctions can expose the company to greater liability than the per day civil penalty

Some important legal technicalities

2. Committed to agency discretion

- The decision whether to enter into consent decree negotiations or to reject a consent decree is committed to the investigating agency's discretion
- Agency decisions to refuse to accept a consent decree are not subject to review under the Administrative Procedure Act

Some important legal technicalities

3. No finding of facts or liability

- Consent decrees are entered by the court or FTC without adjudication of the merits or the finding of any facts
 - There is typically no active litigation: Most consent decrees are negotiated prior to the filing of the complaint and filed simultaneously with the complaint
 - Antitrust consent decrees historically have contained an explicit disclaimer that the parties' acceptance of the consent settlement—
 1. Is for settlement purposes only
 2. Does not constitute an admission by Respondents that they violated the law as alleged in the complaint
 3. Does not constitute an admission by the respondents that the facts as alleged in the complaint (other than jurisdictional facts) are true
 - *Note:* An admission of jurisdictional facts is necessary to provide the court or administrative tribunal with subject matter jurisdiction to enter the consent decree

Some important legal technicalities

4. The role of consent

- In the absence of an adjudication of the merits, the power of the court or agency to enter a consent settlement as a final order rests on the consent of the parties to the settlement:

[I]t is the parties' agreement that serves as the source of the court's authority to enter any judgment at all. More importantly, it is the agreement of the parties, rather than the force of the law upon which the complaint was originally based, that creates the obligations embodied in a consent decree.¹

- Corollaries

- Because the source of the court's authority to enter a consent decree is the parties' agreement and not a violation of law, no proof or admission of a violation of a legal obligation is needed before a court can enter and enforce a consent decree as a judicial order
- Conversely, a person (including a party in the same litigation) that is not a signatory to a consent decree is not bound by it, nor can a consent decree modify a third-party's rights or impose obligations or duties on a third party²
 - Accordingly, if a consent decree imposes obligations on a party that results in a breach of that party's obligations to a third party, the third party may sue for breach and the consent decree does not provide immunity for the breach

¹ Int'l Ass'n of Firefighters Local 93. v. City of 478 U.S. 501, 522 (1986) (citations omitted).

² *Id.* at 529; United States v. Ward Baking Co., 376 U.S. 327 (1964); Hughes v. United States, 342 U.S. 353 (1952).

Some important legal technicalities

5. Dual nature of consent decrees

- *Basic rule:* United States v. ITT Cont'l Baking Co. (1975):

Consent decrees and orders *have attributes both of contracts and of judicial decrees* or, in this case, administrative orders. While they are arrived at by negotiation between the parties and often admit no violation of law, they are motivated by threatened or pending litigation and must be approved by the court or administrative agency. *Because of this dual character, consent decrees are treated as contracts for some purposes but not for others.*¹

- Whether a consent decree will be treated as a contract will depend upon the particular context in which the issue arises

¹ United States v. ITT Cont'l Baking Co., 420 U.S. 223, 237 n. 10 (1975) (internal citation omitted).

Some important legal technicalities

6. Construing consent decrees

- Courts generally construe consent decrees as contracts between the settling parties
 - Consent decrees “closely resemble contracts” and their “most fundamental characteristic” is that they are voluntary agreements negotiated by the parties for their own purposes¹
 - As a general rule, courts construe consent decrees to give effect to the parties’ intent as expressed in the decree itself
 - “[S]ince consent decrees and orders have many of the attributes of ordinary contracts, they should be construed basically as contracts, without reference to the legislation the Government originally sought to enforce but never proved applicable through litigation.”²
 - *Query*: Is this still the state of the law?
- But the contract analogy does not extend to third-party beneficiary enforcement
 - A consent decree is not enforceable directly or in collateral proceedings by those who are not parties to it³
 - Even intended third-party beneficiaries of a consent decree lack standing to enforce its terms

¹ Int’l Ass’n of Firefighters Local 93. v. City of 478 U.S. 501, 519, 522 (1986).

² United States v. ITT Cont’l Baking Co., 420 U.S. 223, 236-37 (1975).

³ Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 750 (1975).

Some important legal technicalities

7. Modifying consent decrees

- Modification with consent of all parties
 - Courts generally will modify the terms of a consent decree with the consent of all parties, provided that the modification does not contravene the public interest
- Modification over the opposition of a party
 - In *United States v. Swift & Co.*, the Supreme Court rejected the contention that a consent decree should be considered a contract for purposes of determining whether the courts have the power to modify such a decree absent the parties' consent¹

Consider three different scenarios

¹ 286 U.S. 106, 114-15 (1932); see *Rufo v. Inmates of Suffolk Cnty. Jail*, 502 U.S. 367, 378 (1992) (“[A consent decree] is an agreement that the parties desire and expect will be reflected in, and be enforceable as, a judicial decree that is subject to the rules generally applicable to other judgments and decrees.”).

Some important legal technicalities

7. Modifying consent decrees

- Modification over the opposition of a party (con't)
 - *Scenario 1*: Conditions have changed since the entry of the consent decree, the restrictions in the consent decree now affirmatively harm the public interest, and the private party bound by the restrictions seeks modification. The government opposes.
 - Following *Swift*, courts will modify or terminate a consent order over the government's opposition if, because of changed circumstances, the consent order harms the public interest
 - Rule 60(b)(5) also provides that a court may relieve a party from a final judgment or order if "applying [the judgment] prospectively is no longer equitable"²

¹ 286 U.S. 106, 114 (1932).

² Fed. R. Civ. P. 60(b)(5); see *Rufo v. Inmates of Suffolk Cnty. Jail*, 502 U.S. 367, 378 (1992) (noting application of Rule 60(b) to a consent decree).

Some important legal technicalities

7. Modifying consent decrees

- Modification over the opposition of a party (con't)
 - *Scenario 2*: Conditions have changed since the entry of the consent decree, and the government concludes that the restrictions it negotiated in the consent decree are now inadequate to preserve competition and seeks modification to include new or enhanced restrictions. The private party opposes.
 - *WDC*: Most likely, courts will be reluctant to impose new obligations on the respondent over the respondent's opposition unless the consent agreement contemplates such changes in light of changed circumstances.

Some important legal technicalities

7. Modifying consent decrees

- Modification over the opposition of a party (con't)
 - *Scenario 3*: Conditions have *not* changed since the entry of the consent decree, but the government concludes it has negotiated inadequate relief to preserve competition and seeks to include new or enhanced restrictions. The private party opposes.
 - *WDC*: In the absence of changed circumstances, courts are likely to deny modifications to strengthen the consent order over the respondent's opposition, reasoning that the government must live with the relief it originally negotiated.

An important aside: *Cleveland Firefighters*

■ *Cleveland Firefighters*¹

- **Rule:** A court may enter a consent decree as a final judgment even if the consent decree contains relief that a court could not award in a fully litigated proceeding
 - **Corollary:** An agency may demand relief in a consent decree that a court could not award the agency in a litigated proceeding
- **Qualifications:** The Court qualified this rule in two significant ways:
 1. The consent decree cannot conflict with or violate the law on which the complaint was based
 2. Inclusion of relief in a consent does not immunize the parties from a collateral attack that discharging their consent decree obligations—
 - Violates some other law, *or*
 - Breaches some contractual obligation to a third party

Query: Would the court abuse its discretion if it entered a consent decree that it knew required the respondent to violate some law or breach some contract?

¹ Int'l Ass'n of Firefighters Local 93. v. City of Cleveland, 478 U.S. 501 (1986).

Agency Perspectives

Agency perspectives

■ Consent settlements

- The acceptance of a consent settlement is in the unfettered discretion of the investigating agency
- The agency's willingness to accept a consent decree settlement depends largely on the confidence the agency has that the settlement will in fact negate the anticompetitive effect the agency believes the transaction will create
 - Depending on administration, the requisite level of confidence can be anything from likely to a near-certainty that the consent settlement will negate all anticompetitive effects of the merger

Agency perspectives

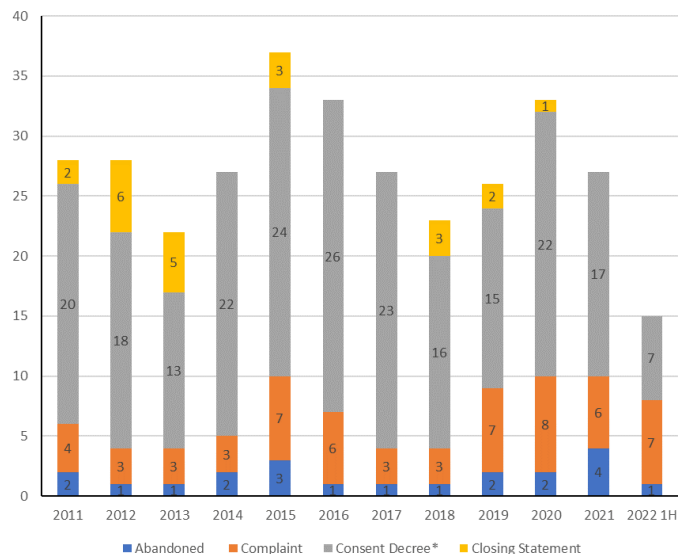
■ Consent settlements

- To satisfy the agency, the consent settlement must—
 1. Eliminate the agency's competitive concerns with the main acquisition
 2. Be workable in practice
 3. Must not involve the agency in continuous oversight or affirmative regulation
 4. Must not create its own antitrust concerns

The history

- Since at least 1982, the DOJ/FTC has accepted divestiture consent decrees in most cases to resolve competitive concerns

Significant U.S. Antitrust Merger Interventions



Year	Abandoned	Complaint	Consent Decree*	Closing Statement	Total
2011	2	4	20	2	28
2012	1	3	18	6	28
2013	1	3	13	5	22
2014	2	3	22		27
2015	3	7	24	3	37
2016	1	6	26		33
2017	1	3	23		27
2018	1	3	16	3	23
2019	2	7	15	2	26
2020	2	8	22	1	33
2021	4	6	17		27
2022 1H	1	7	7		15

* Includes two "fix it first" resolutions in 2012

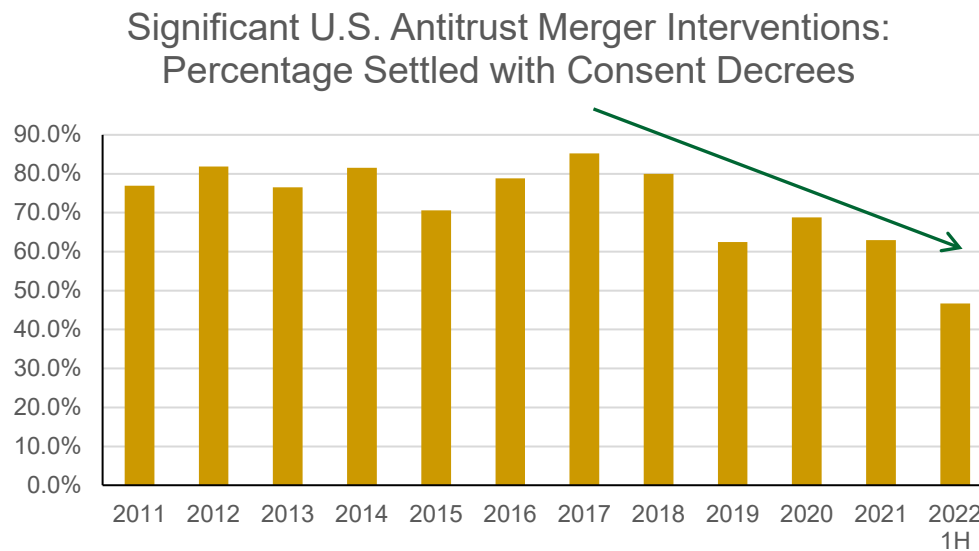
Source: Dechert LLP, [DAMITT Q2 2022: Is Merger Enforcement Taking a Conservative Turn?](#) (July 26, 2022); Dechert LLP, [DAMITT 2018 Year in Review](#) (Jan. 24, 2019). Dechert declines a "significant" investigation as one that involves a deal that is HSR reportable for which the result of the investigation is a consent order, a complaint challenging the transaction, an official closing statement by the reviewing antitrust agency, or the abandonment of the transaction with the antitrust agency issuing a press release. It does not include an in-depth second request investigation in which the investigating agency concludes there is no antitrust concern but issues no closing statement, resulting in the number of investigations in which the agency takes no enforcement action is undercounted. Dechert calculates the duration of an investigation from the date of announcement to the completion of the investigation (presumably including any time necessary to negotiate a consent decree).

The history

- Through most of the Obama administration, the agencies believed that consent decrees provided the best way to resolve the agency concerns from society's perspective
 - The agencies presumed that there were likely significant efficiencies in the nonproblematic parts of the deal, and if the agency did not accept a consent decree and the deal collapsed, consumers would lose the benefits of the nonproblematic parts of the deal
 - So even if the consent decree did not completely negate the transaction's anticompetitive effect, there was an offsetting social benefit from the efficiencies from the part of the transaction that was allowed to close

The history

- Beginning in 2017, however, the DOJ/FTC have resolved a decreasing percentage of their interventions with consent relief
 - Nonetheless, the percentage of interventions resolved through consent relief remains high

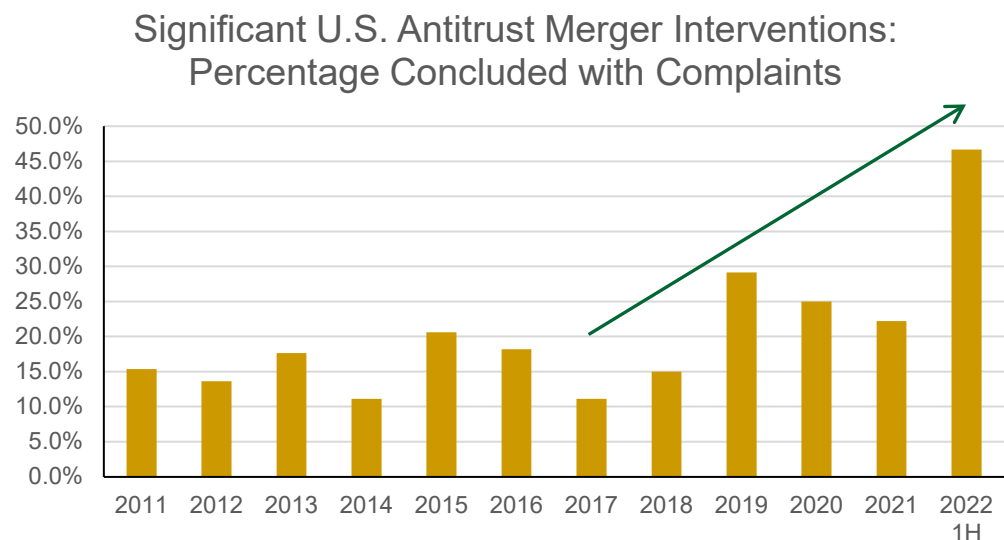


Note the decline in the Trump administration and the Biden administration to date

Source: Dechert LLP, [DAMITT Q2 2022: Is Merger Enforcement Taking a Conservative Turn?](#) (July 26, 2022); Dechert LLP, [DAMITT 2018 Year in Review](#) (Jan. 24, 2019). Interventions occur when the investigation concludes that the transaction violates Section 7, which is resolved wither by consent decree, a complaint, or the parties voluntarily abandoning the transaction.

The history

- As resolutions through consent relief have decreased, the percentage of interventions resolved through complaints has increased
 - NB: Some of these litigations have been settled by consent decree before trial



- Agencies increasingly less willing to accept consent settlements at the end of an investigation
- Merging parties increasingly more willing to litigate

Source: Dechert LLP, [DAMITT Q2 2022: Is Merger Enforcement Taking a Conservative Turn?](#) (July 26, 2022); Dechert LLP, [DAMITT 2018 Year in Review](#) (Jan. 24, 2019).

The history

■ Obama/Trump administrations

- Beginning late in the Obama administration and continuing to some degree in the Trump administration, the agencies began to become more skeptical that consent decrees would cure their perceived competitive problems
- Two sources for this skepticism—
 1. The emergence of several studies purportedly finding anticompetitive price increases in the market in the wake of a divestiture consent decree, *and*
 2. An increasing view that the nonproblematic parts of a merger did not yield significant efficiencies

Note: Both results are subject to vigorous academic dispute

The history

■ The Biden administration

□ DOJ

- As a matter of principle, consent decrees are not usually an acceptable solution to a problematic merger¹
 - Consent settlements fail frequently and unpredictably
 - The proper remedy for a problematic horizontal merger is a blocking permanent injunction
- Since Jonathan Kanter was sworn in as AAG On November 16, 2021, the DOJ has not accepted a consent settlement

□ FTC

- As of early fall 2022, no has been apparent change in the Commission's willingness to accept consent decrees—still very strict, but no objection on principle
- Since Lina Khan was sworn in as FTC Chair on June 15, 2021, the Commission has given—
 - Final approval to ten divestiture consent settlements
 - Provisional approval to two divestiture consent settlements

¹ Jonathan Kanter, Ass't Att'y Gen., Antitrust Div., U.S. Dep't of Justice, [Antitrust Enforcement: The Road to Recovery](#), Prepared Remarks at the University of Chicago Stigler Center, Chicago, IL (Apr. 21, 2022).

The history

■ The Biden administration

□ An emerging work-around: “Fix it first”

- In a “fix it first,” the parties restructure the transaction to eliminate the problematic horizontal overlap and file their HSR notifications only on the restructured, nonoverlapping transaction
- The divestiture sale must be consummated *before* the main transaction closes because the HSR filings will not cover a transaction with the overlap
 - However, the divestiture closing of the divestiture sale may be delayed until the main (restructured) transaction “clears” the merger review
- The antitrust concern presented by the original overlap must be entirely eliminated by the “fix it first” divestiture to the satisfaction of the investigating agency in—
 - in the business and assets to be divested
 - the manner of divestiture (including any ancillary transaction agreements), *and*
 - the identity of the divestiture buyerOtherwise, the agency will challenge the transaction as violating Section 7
- The merging parties can “litigate the fix” if the investigating agency rejects the “fix it first” solution
- Since the buyer never takes control of the two overlapping businesses, there is no need for a consent decree

Consent Remedies in Horizontal Cases: The Details

Mergers and acquisitions involving competitors are by far most common type of business combination challenged under the merger antitrust laws. We will examine relief in vertical cases later in the course.

Agency requirements

1. Almost always require the sale of a complete “business”
2. Will permit “trade up” solutions
3. Typically will require a “buyer upfront”
4. Everything associated with the business to be divested must go
 - a. Divest all physical assets
 - b. Divest all IP
 - c. Make designated “key” employees available for hire by divestiture buyer
 - d. Assign/release customer contracts and revenues
 - e. Transfer all business information
5. Merged firm must provide any necessary short-term transition services and support so that the divestiture can immediately compete
6. Often will require a “monitor” to oversee performance of obligations
7. No long-term entanglements between the merged firm and the divestiture buyer

Agency requirements

8. Agency will require the right of approval over divestiture buyer *and* the divestiture sales agreement
9. Agency will require a very tight deadline for closing the divestiture
 - ❑ 10 business days for buyers upfront
 - ❑ 3 months otherwise
10. If the consent decree has a divestiture obligation, it will contain a provision for the appointment of a “trustee” in the event the merged firm fails to divest in the time required by the decree
11. Agency can withdraw consent, in its discretion, any time before the entry of the final judgment

Agency requirements

- New development: Prior approval provisions
 - Provision requiring prior approval by the reviewing agency of future acquisitions by the defendant-buyer
 - When used in the past, applied only to acquisitions that were not HSR-reportable
 - Does not appear to be part of the Biden antitrust enforcement policy
 - Likely to be included to consent decrees for all types of mergers
 - The FTC has started including provisions in some consent decrees that purport to require the divestiture buyer to obtain the prior approval of the Commission before any sale of the divestiture assets during the term of the consent decree

Consent Remedies: The Process

The basic idea

■ The process

1. The enforcement agency and parties agree on the antitrust concern to be resolved
2. The parties negotiate a package of business operations, assets, and ancillary commitments that would permit a qualified third-party divestiture buyer to maintain the premerger level of competition
3. The parties memorialize the divestiture package in a proposed consent decree and related documents
4. The merging parties find a divestiture buyer
5. The divestiture buyer applies for agency approval
6. The agency approves the divestiture package and divestiture buyer
 - Assumes the agency requires a “buyer upfront”
 - In some cases, the agency will accept a consent agreement that provides for the identification of the divestiture buyer after the agency accepts the consent settlement
7. DOJ files complaint and motion for entry of consent decree in federal district court/ FTC provisionally accepts consent order
8. The agency publishes the proposed consent decree in the federal register and other venues inviting public comments
9. The court/FTC considers public comments and agency response
10. The court/FTC enters the consent decree as a final judgment

Consent settlement documents

DOJ (federal district court proceeding)	FTC (FTC administrative proceeding)
Complaint	Administrative complaint

Consent settlement documents

DOJ (federal district court proceeding)	FTC (FTC administrative proceeding)
Complaint	Administrative complaint
Proposed Hold Separate Stipulation and Order —Proposed Final Judgment —[Contained in body of stipulation]	Agreement Containing Consent Orders —Proposed Decision and Order —Order to Maintain Assets

Consent settlement documents

DOJ (federal district court proceeding)	FTC (FTC administrative proceeding)
Complaint	Administrative complaint
Proposed Hold Separate Stipulation and Order —Proposed Final Judgment —[Contained in body of stipulation]	Agreement Containing Consent Orders —Proposed Decision and Order —Order to Maintain Assets
Competitive Impact Statement	Analysis of Proposed Consent Order to Aid Public Comment

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Competitive Impact Statement	Analysis of Proposed Consent Order to Aid Public Comment
Hold Separate Stipulation and Order (so ordered by the court)	Decision and Order (accepting consent settlement for public comment and entering Order to Maintain Assets)

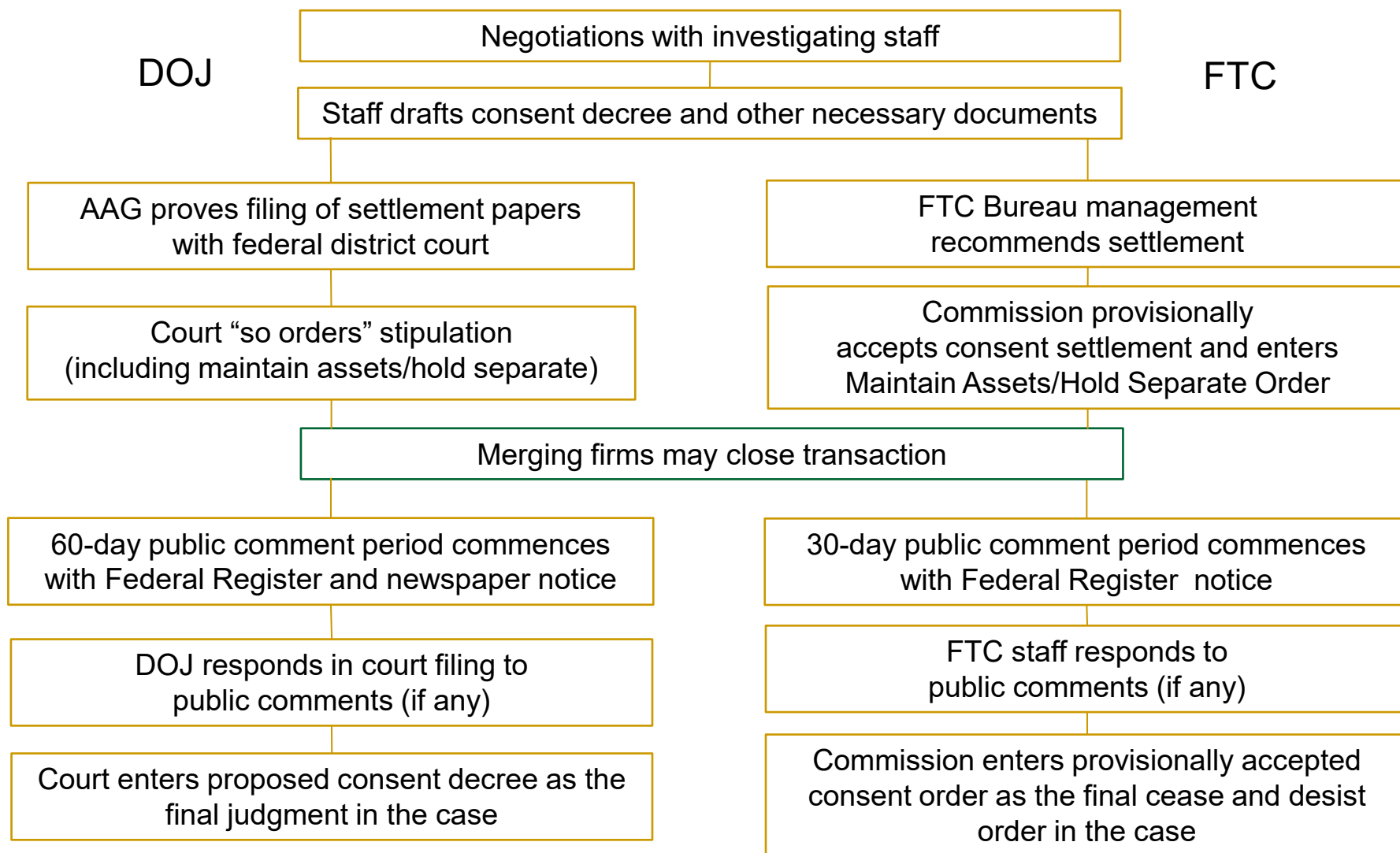
Consent settlement documents

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Federal Register and newspaper notice [Public comment period: 60 days]	Federal Register notice [Public comment period: 30 days]

Consent settlement documents

DOJ (federal district court proceeding)	FTC (FTC administrative proceeding)
Complaint	Administrative complaint
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Federal Register and newspaper notice [Public comment period: 60 days]	Federal Register notice [Public comment period: 30 days]
Final Judgment	Decision and Order (final)

Typical settlement process—Overview



Consent Decree Violations

Consent decree violations

■ DOJ

- DOJ consent decrees are technically injunctions ordered by a federal district court
- Violations are punishable by civil or criminal contempt
- Actionable contempt requires a showing by “clear and convincing evidence” that the defendant violated a “clear and unambiguous” prohibition in the consent decree

■ FTC

- FTC consent orders are technically cease and desist orders issued by the FTC
- Violations are subject to civil penalties in federal district court
 - The maximum amount of the penalty today has been inflation-adjusted to \$43,792 for 2021
 - If the district court enters an injunction in aid of a Commission order pursuant to FTC Act § 5(l), violations of that injunction are subject to civil and criminal contempt sanctions

Consent decree violations

■ DOJ

- A finding of contempt in the D.C. Circuit requires a showing by “clear and convincing evidence” that the defendant violated a “clear and unambiguous” prohibition in the consent decree¹
- New innovation in the Trump administration
 - Recent DOJ consent decrees contain language designed to lower the evidentiary standard for DOJ to prove civil contempt for a consent decree violation from clear and convincing evidence to a preponderance of the evidence:

The United States retains and reserves all rights to enforce the provisions of this Final Judgment, including its right to seek an order of contempt from this Court. Defendants agree that in any civil contempt action, any motion to show cause, or any similar action brought by the United States regarding an alleged violation of this Final Judgment, the United States may establish a violation of the decree and the appropriateness of any remedy therefor by **a preponderance of the evidence**, and they waive any argument that a different standard of proof should apply.²

¹ See *United States v. Microsoft Corp.*, 980 F. Supp. 537, 541 (D.D.C. 1997). Other circuits have similar requirements, although the articulation may be different.

² See *United States v. TransDigm Grp. Inc.*, No. 1:17-CV-02735-ABJ, 2018 WL 2382602, at *9 (D.D.C. Apr. 4, 2018).

Consent decree violations

■ FTC

- ❑ Violations of an FTC cease and desist order issued under FTC Act § 5 are subject to civil penalties and possible subsequent criminal contempt sanctions
- ❑ Civil penalties: FTC Act § 5(l)

Any person, partnership, or corporation who violates an order of the Commission after it has become final, and while such order is in effect, shall forfeit and pay to the United States a civil penalty of not more than \$10,000 for each violation, which shall accrue to the United States and may be recovered in a civil action brought by the Attorney General of the United States. Each separate violation of such an order shall be a separate offense, except that in a case of a violation through continuing failure to obey or neglect to obey a final order of the Commission, each day of continuance of such failure or neglect shall be deemed a separate offense. In such actions, the United States district courts are empowered to grant mandatory injunctions and such other and further equitable relief as they deem appropriate in the enforcement of such final orders of the Commission.¹

- The maximum amount of the penalty today has been inflation-adjusted to \$46,517 for 2022
- Civil penalty actions are subject to the preponderance of the evidence standard
- ❑ Enforcement injunctions
 - If the district court enters an injunction in aid of a Commission order pursuant to Section 5(l), violations of that injunction are subject to civil and criminal contempt sanctions

¹ 15 U.S.C. § 5(l).

“Litigating the Fix”

Options if the agency refuses to settle

- If the agency refuses to settle at the end of an investigation, the merging parties have three choices—
 1. They can preempt litigation by voluntarily terminating their merger agreement and withdrawing their HSR filings
 2. They can proceed to court and litigate the merits of the original deal
 - The agency will litigate to obtain what the agency believes is a suitable permanent injunction (almost always a blocking injunction in a preclosing challenge)
 3. They can “litigate the fix”
 - That is, they can contractually implement their proposed divestiture consent decree by agreeing to sell the proposed divestiture business and assets to a third party
 - The court will evaluate the merits of the transaction with the “fix” in place, that is, it will evaluate—
 - Whether the main transaction, without the business and assets subject to the fix, violates Section 7, *and*
 - Whether the fix—including the business and assets to be divested and the qualifications of the divestiture buyer—is sufficient to preserve competition in the alleged problematic market
 - If the fix will not preserve competition, then the main transaction violates Section 7

“Litigating the fix”

- Reasons the agency might reject a proffered fix—
 1. Does not cover all of the relevant markets of concern to the agency,
 2. Fails to include all of the assets the agency believes are necessary for the divestiture buyer to preserve the premerger level of competition, *or*
 3. Does not involve a divestiture buyer with the ability or resources the agency believes is—
 - a. Financially viable, *or*
 - b. Capable of preserving the premerger level of competition

“Litigating the fix”

■ Burden of proof in litigating the fix

- The burden is on the parties to show that the fix defeats the agency prima facie case against the original deal
- Depending on the case, this may require the merging parties to—
 - Defeat the agency prima facie case in the relevant markets not addressed by the fix
 - Persuade the court that the necessary assets in the hands of a qualified divestiture buyer will eliminate any reasonable likelihood of an anticompetitive effect in the relevant market in which the fix operates
 - Persuade the court that the divestiture buyer has the incentive and ability with the divestiture assets to preserve the premerger level of competition in the relevant market in which the fix operates

In many if not most cases, the merging parties will have to do all three

If the “fix” does not defeat the government’s prima facie case in some market, then the restructured transaction violates Section 7

“Litigating the fix”

■ Collateral attack

- Third parties can collaterally attack the sufficiency of a DOJ/FTC consent decree in their own Section 7 action
- This is what a group of states did in the T-Mobile/Sprint deal after the DOJ accepted a consent decree¹

¹ See *New York v. Deutsche Telekom AG*, 439 F. Supp. 3d 179 (S.D.N.Y. 2020). Unfortunately, the states did not prevail in their challenge. In retrospect, most observers now believe that the DOJ consent decree in fact failed to preserve competition. We will examine T-Mobile/Sprint later in the course.

CLASS 7 SLIDE

Unit 7. Hertz/Avis Budget/Dollar Thrifty

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

UnitedHealthcare/Change

ORDER

This matter is before the Court after a bench trial. Upon review of the entire record and for the reasons set forth in the accompanying memorandum opinion, it is

ORDERED that the Government's request to enjoin the proposed merger of Defendant UnitedHealth Group Incorporated with Defendant Change Healthcare, Inc. is **DENIED**. It is further


ORDERED that Defendants **DIVEST** ClaimsXten to TPG Capital as proposed. And it is further

ORDERED that judgment be entered for Defendants.

This is a final appealable order.

The Clerk is directed to terminate this case.

DATE: September 19, 2022



CARL J. NICHOLS
United States District Judge

Hertz/Avis Budget/Dollar Thrifty



The 2010 Hertz/Dollar Thrifty Deal

2010 Hertz/Dollar Thrifty deal

■ Hertz

- \$7.1 billion in revenues
- Hertz and Advantage brands
- Hertz: 8200 rental locations worldwide
 - Premium global rental car brand
 - Focus on corporate and high-end leisure
 - #1 in U.S. airport rentals (78 major airports)
- Advantage: 26 airports in the U.S.
 - “Flanker” brand to compete for price-conscious travelers at airports
 - Lower price proposition/fewer service attributes



2010 Hertz/Dollar Thrifty deal

■ Dollar Thrifty

- ❑ \$1.5 billion in revenues
- ❑ \$1.9 global enterprise value
- ❑ Dollar Rent A Car and Thrifty Car Rental brands
 - “Middle market” airport brands
- ❑ 1558 corporate and franchise locations worldwide
 - 298 corporate-owned
 - 1260 franchisee locations



2010 Hertz/Dollar Thrifty deal

■ 2010 merger agreement

- Signed on April 26, 2010
- Hertz to buy Dollar Thrifty for \$41.00 per share (= \$1.3 equity value)
 - \$6.88 in special Dollar Thrifty dividend (= \$200 million)
 - \$25.92 to be paid by Hertz in cash (= \$756 million)
 - \$12.88 in Hertz stock (valued at the closing price on April 23, 2010) (= \$317 million)
 - As a result, DT shareholders will hold 5.5% of Hertz after closing
- 19% deal premium to 30-day closing average on Dollar Thrifty stock
 - → DTAG 30-day closing average = \$34.45
- \$180 million in annual recurring synergies
 - Primarily in fleet, IT systems, and procurement savings



2010 Hertz/Dollar Thrifty deal

- Two questions

Why did Hertz want to do this deal?

Why did Dollar Thrifty to do this deal?

Hertz business rationale

Significant Strategic & Financial Benefits

Strategic Rationale

- Gain instant scale in middle tier sector with established brand and airport infrastructure
- Allows Hertz to pursue aggressive value strategy without risking dilution to Hertz brand
- Provides Hertz with multiple strategic options to address leisure business and compete with multi-brand peers in all three tiers of the market

Significant Synergy Potential

- At least \$180 million of annual run-rate synergies expected
- Key areas of cost reduction / operational improvement include
 - Procurement: significant portion of Dollar Thrifty's spend is decentralized
 - IT: overlapping systems and future capital spend
 - Fleet: benefit from fleet sharing and reduced cap. cost
 - Public company costs

All cost savings

Positive Financial Impact

- 20% equity used to maintain strong credit profile

(\$ in millions)

As of December 31, 2009

	Hertz Standalone	Hertz Pro Forma
Total Corp. Debt / Corp. EBITDA	4.8x	4.4x
Total Corp. Debt / Corp. EBITDA (w/ syn)		3.7x
Total Debt / Gross EBITDA	3.6x	3.4x
Total Debt / Gross EBITDA (w/ syn)		3.2x

- Earnings accretive

Hertz business rationale

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- Earnings accretive

Unquantified
revenue synergies

Hertz business rationale

- Slide from Hertz investor presentation on the deal:



- Premium global brand competing with Avis, National
- Corporate, higher-end leisure, special occasions
- High service, higher-end fleet mix
- Making inroads in Off-Airport segment historically dominated by Enterprise



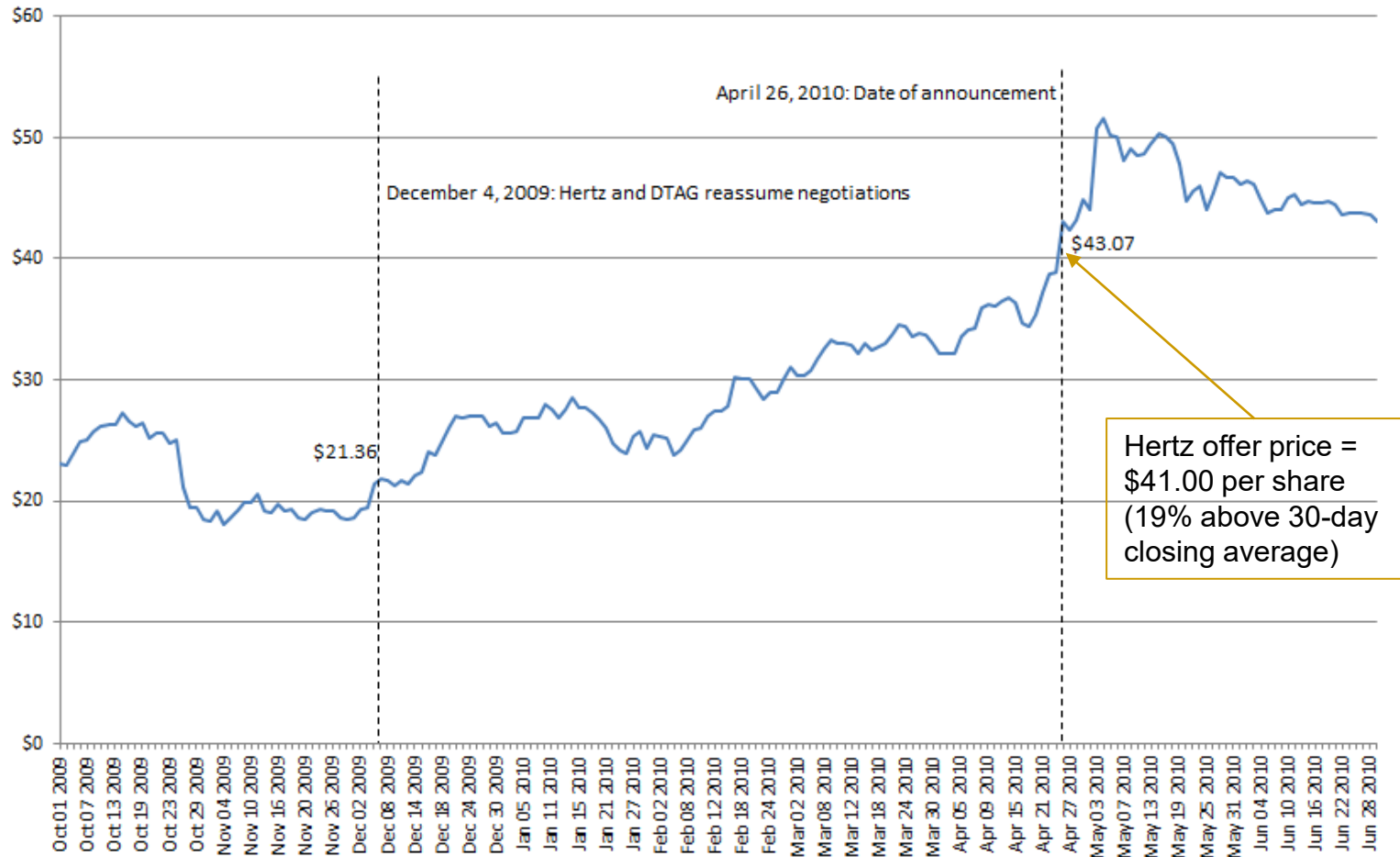
- Middle market airport brands competing with, but differentiated from Enterprise, Budget, Alamo
- Value proposition emphasizing lower price but consistently delivering essential services (speed, reliability)
- Consider dual brand operationally, but keep separate for marketing, positioning, e.g., separate websites



- Flanker airport brand to compete for economy leisure business against Payless, Fox, etc.
- Lower price proposition for price-focused leisure customers
- Reliable, clean cars, but fewer service attributes

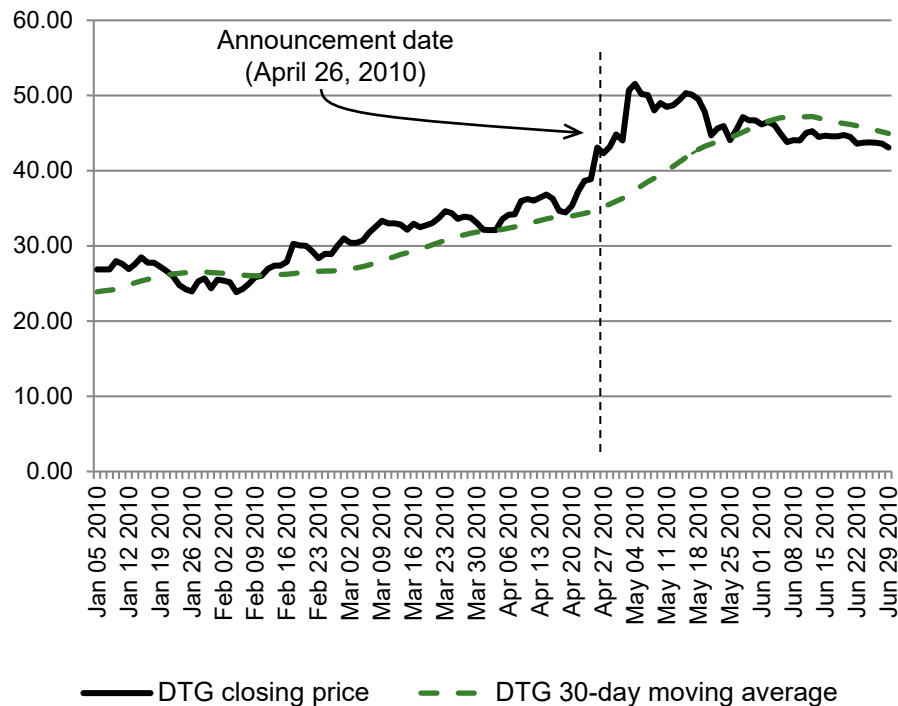
Dollar Thrifty business rationale

Dollar Thrifty Closing Prices
October 1, 2009 — June 29, 2010



Dollar Thrifty preannouncement run-up

Dollar Thrifty Closing Prices
January 4, 2010 — June 29, 2010



Closing Price Changes
(compared to prior months)

	1-month	2-months	3-months
DTG	12.3%	36.9%	56.7%
DJIA	2.9%	9.0%	10.1%

Recall that Hertz contacted Dollar Thrifty in December 2009 to restart negotiations

The deal price

■ Payments to Dollar Thrifty shareholders (per DTAG share)

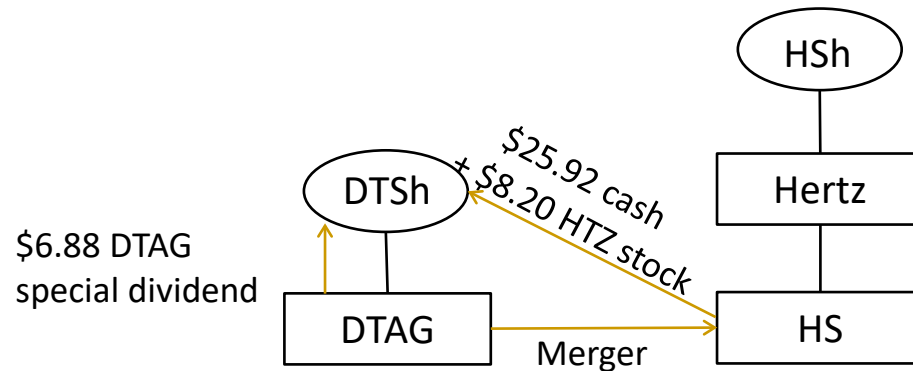
\$6.88	Dollar Thrifty special cash dividend (paid by Dollar Thrifty)
\$25.92	Cash (paid by Hertz)
\$8.20	0.6366 Hertz shares, valued on the closing price on April 23, 2010 (the last business day before the announcement on April 26, 2010)
\$41.00	Total consideration

■ Some implications

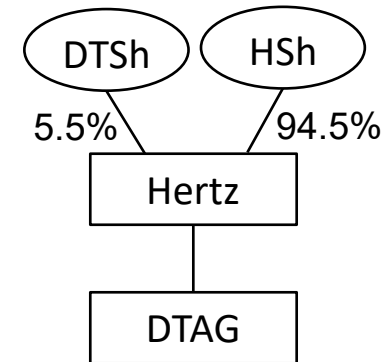
- Special DTAG cash dividend = \$200 million →
 - DTAG shareholders would receive \$953m in cash
 - But Hertz would only pay \$753m in cash
 - For a total Hertz payment of \$25.92 in cash and \$8.20 in stock = \$32.12 per share
- BUT the \$200 million in the DTAG special dividend is still real money to Hertz because DTAG will be worth \$200 million less with the dividend payout

Hertz/DTAG Reverse Triangular Merger

Before:



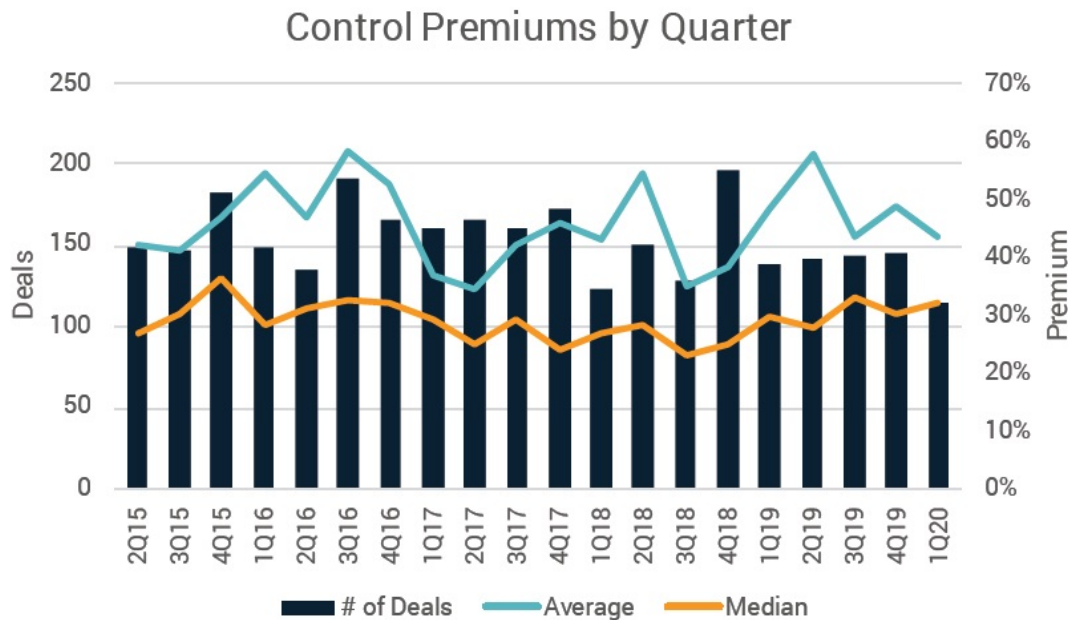
After:



where	DTAG	Dollar Thrifty Automotive Group (target firm)
	DTSh TS	DTAG's premerger shareholders
	Hertz	Acquiring firm
	HSh	Hertz premerger shareholders
	HS	Hertz acquisition subsidiary

Deal premium

- Why did Hertz pay a deal premium?
 - In almost all deals, the buyer pays a price significantly above the price of the target's stock in the period just before when the stock price is affected by the prospect of an acquisition
 - BVR/FactSet Control Premium Study updated for 2020 Q1:

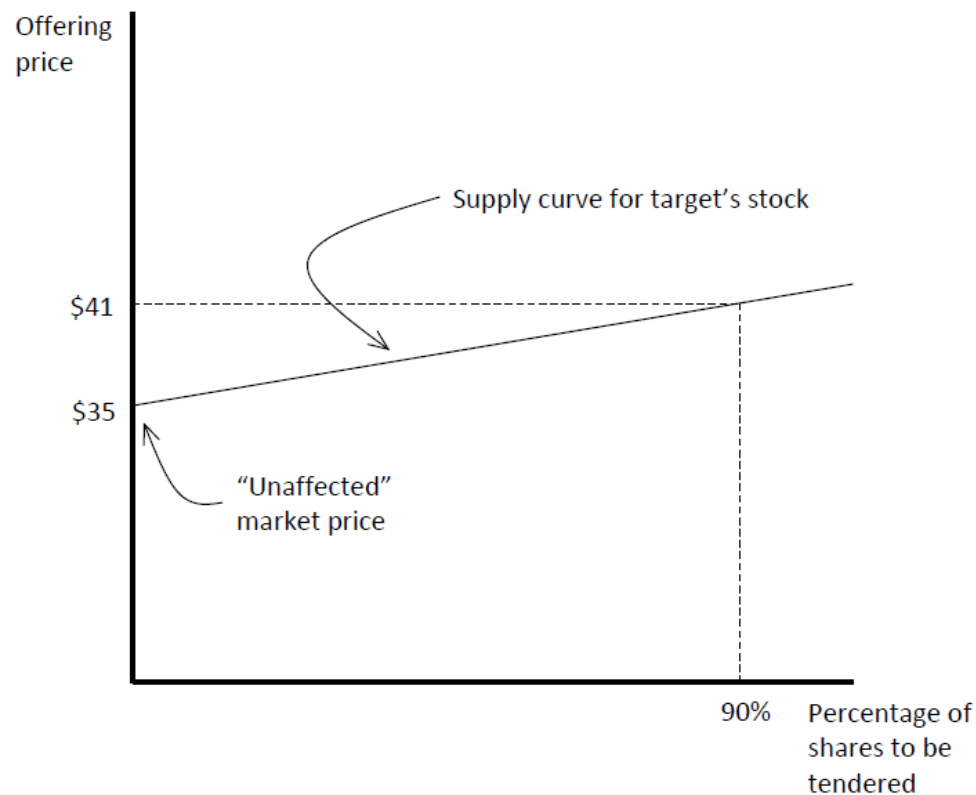


Deal premium

- Why did Hertz pay a deal premium?
 - Two reasons for a deal premium—
 1. Upward-sloping supply curve for DTAG stock
 2. Bargaining game over the synergies gain

Deal premium

- Why did Hertz pay a deal premium?
 - Upward-sloping supply curve for DTAG stock



Deal premium

- Why did Hertz pay a deal premium?
 - Upward-sloping supply curve for DTAG stock
 - Why is the supply curve of stock upward sloping?
 - *Ordinary course*: Different shareholders have different expectations about the value of the stock
 - Different expectations about future dividends
 - Different expectations about capital appreciation
 - *In a deal*: Different expectations of what the selling price will be

If we rank order the shareholders by their reservation sales price from lowest to highest, this traces out an upward-sloping supply curve for the target's stock

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Three parts

- a. Hertz determines its reservation price (the maximum price it would be willing to pay for DTAG)
 - ❑ But does not tell DTAG
- b. DTAG determines its reservation price (the minimum price the DTAG board would recommend that the shareholders accept)
 - ❑ But does not tell Hertz

The difference is the “gain from trade”

- c. *Problem:* Parties must agree on a purchase price (which will allocate the gain from trade)
 - ❑ Think of the purchase price as the going concern value + deal premium
 - ❑ The allocation of the gains from trade will occur through the deal premium

Let's turn to the bargaining game to determine the deal premium

Deal premium

- Why did Hertz pay a deal premium?

- 2. Bargaining game over the synergies gain—Hertz' reservation price

- Total value to Hertz (V_t) of the DTAG merger is equal to the going concern value of DTAG (V_{DTAG}) plus any synergies gains (V_s) Hertz expects to result from the transaction:

$$V_t = V_{DTAG} + V_s$$

- Hertz sets the going concern value V_{DTAG} of DTAG at \$932 million (after dividend)

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Hertz' reservation price

■ *Background:* Going concern value

□ *Definition:* The economic value of an entity as an operating unit

□ *Components:*

1. The present discounted value (PDV) of the *free cash flow* during the valuation period
 - *Free cash flow:* The cash a company generates after accounting for cash outflows to support operations and maintain its capital assets
 - Effectively, the cash generated by the company that is available for investment and to pay dividends (does not count borrowing)
2. The present discounted value of the residual value calculated at the end of the valuation period
3. The value of the assets considered unnecessary to operate the entity
 - *Examples:* Excess working capital, non-operating assets, assets that can be liquidated

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Hertz' reservation price

■ *Background:* Discounted present value

□ *Problem 1:* Say someone was going to give you \$1.00 a year from now. How much would you be willing to take today to sell this right to receive \$1.00 a year from now?

- *Answer:* Your reservation price should be that price p^* at which you could invest p^* today and will have \$1.00 a year from now
- This is equal to the amount you receive today (p^*) plus the earnings on that amount over the next year (p^*r):

$$p^* + p^*r = 1.00$$

where r is the percentage annual investment rate

Simplifying:
$$p^* \cdot (1 + r) = 1.00$$

Solving for p^* :
$$p^* = \frac{1.00}{1 + r}$$

If $r = 6\%$, then:
$$p^* = \frac{1.00}{1.06} = 0.943396 \text{ (rounded)}^1$$

So you would be willing to take a little less than \$0.95 to sell your right to receive \$1 a year from now

¹ [MathPapa](#) is a great algebraic calculator.

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Hertz' reservation price

■ Background: Discounted present value

□ Problem 2: Same problem, only the \$1.00 gets paid 2 years from now

- Answer: p^* such that p^* invested for one year and then the resulting amount invested for another year yields \$1.00:

$$\begin{array}{c} \text{Amount at end of year 1} \\ \underbrace{(p^*(1+r))(1+r)}_{\text{Amount at end of year 2}} = 1.00 \quad \text{or} \quad p^* = \frac{1.00}{(1+r)^2} \end{array}$$

If $r = 6\%$, then:

$$p^* = \frac{1.00}{(1+r)^2} = \frac{1.00}{(1+0.06)^2} = 0.889996 \text{ (rounded)}$$

So you would be willing to take a little less than \$0.90 to sell your right

□ General formula for n periods at a constant investment rate r per period:

$$p^* = \frac{F}{(1+r)^n}$$

Where F is the future value at the end of the n^{th} period (\$1.00 in Problem 2)

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Hertz' reservation price

■ *Background:* Discounted present value

□ *Problem 3:* Say someone was going to give you \$1.00 a year from now and another \$1.00 two years from now. How much would you be willing to take today to sell this right to receive \$1.00 a year and another dollar two years from now?

■ *Answer:* Your reservation price p^* will be the sum of—

- The PDV of \$1.00 one year from now
- PLUS the PDV of \$1.00 two years from now

$$p^* = \frac{1.00}{1+r} + \frac{1.00}{(1+r)^2}$$
$$= 0.943396 + 0.889996 = 1.833392$$

□ General formula for a constant annuity A at a constant investment rate r :

$$p^* = \sum_{i=1}^n \frac{A}{(1+r)^i} = A \left[\frac{1 - (1+r)^{-n}}{r} \right]$$

For a perpetual annuity:
 $p^* = A/r$

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—Hertz' reservation price

- Hertz claimed an expected annually recurring synergy gain of \$180 million (A)
 - The present discounted value V_s of an annual recurring cash payment in perpetuity (that is, a *perpetual annuity*) discounted at rate r (say 7%) is:

$$V_s = \frac{A}{r} = \frac{\$180 \text{ million}}{0.07} = \$2.57 \text{ billion}$$

- But say that Hertz values synergies only over a 10-year period. Then:

$$V_s^{10} = A \left[\frac{1 - (1 + r)^{-n}}{r} \right] = \$180 \text{ million times} \left[\frac{1 - (1 + 0.07)^{-10}}{0.07} \right] = \$1.26 \text{ billion}$$

Deal premium

- Why did Hertz pay a deal premium?
 2. Bargaining game over the synergies gain—Hertz' reservation price
 - So Hertz expects that the total value V_t of Dollar Thrifty postmerger will be:

$$\begin{aligned} V_t &= V_c + V_s^{10} \\ &= \$932 \text{ million} + \$1.26 \text{ billion} \\ &= \$2.17 \text{ billion} \end{aligned}$$

- But Hertz shareholders will own only 94.5% of the combined company
 - The original Hertz shareholders will not own the whole company because their interest is being diluted by the Hertz stock going to the DTAG shareholders
 - The original Hertz shareholders would hold only 94.5% of the Hertz stock postmerger, so they would get only that portion of V_t (= \$2.075 billion)

So Hertz shareholders should be willing to pay a maximum of \$2.075 billion for the deal (or about \$71 per DTAG share)

Deal premium

■ Why did Hertz pay a deal premium?

2. Bargaining game over the synergies gain—DTAG's reservation price

- No shareholder would sell for less than the “unaffected” current stock price
 - That is, the stock price in the complete absence of merge negotiations or rumors

To study the negotiated division of the synergies gain separate from the upward-sloping supply curve, we will (unrealistically) assume that all DTAG shareholders have a reservation price equal to the unaffected stock price¹

- In fact, DTAG shareholders expectations about the ultimate division of the synergies gain will be reflected in the DTAG stock supply curve

Suppose that the unaffected stock price is \$32

Deal premium

■ Why did Hertz pay a deal premium?

3. Bargaining game over the synergies gain—The purchase price

- DTAG shareholders will not accept anything lower than their reservation price
- BUT they can also bargain for some of the gain resulting from the deal, since unless they agree to the deal Hertz shareholders will receive no gain
- At \$41 per share under Hertz's terms, DTAG shareholders receive a significant deal premium over the “unaffected” price:

	Closing price	Deal premium*
Mar. 23, 2010	34.60	18.5%
Feb. 23, 2010	28.37	44.5%
Jan. 22, 2010	24.29	68.8%

- So this looks like a good deal to the DTAG shareholders
- Also looks like a good deal to the Hertz shareholders
 - Willing to pay up to \$71 per share, but paid only \$41 per share

Deal premium

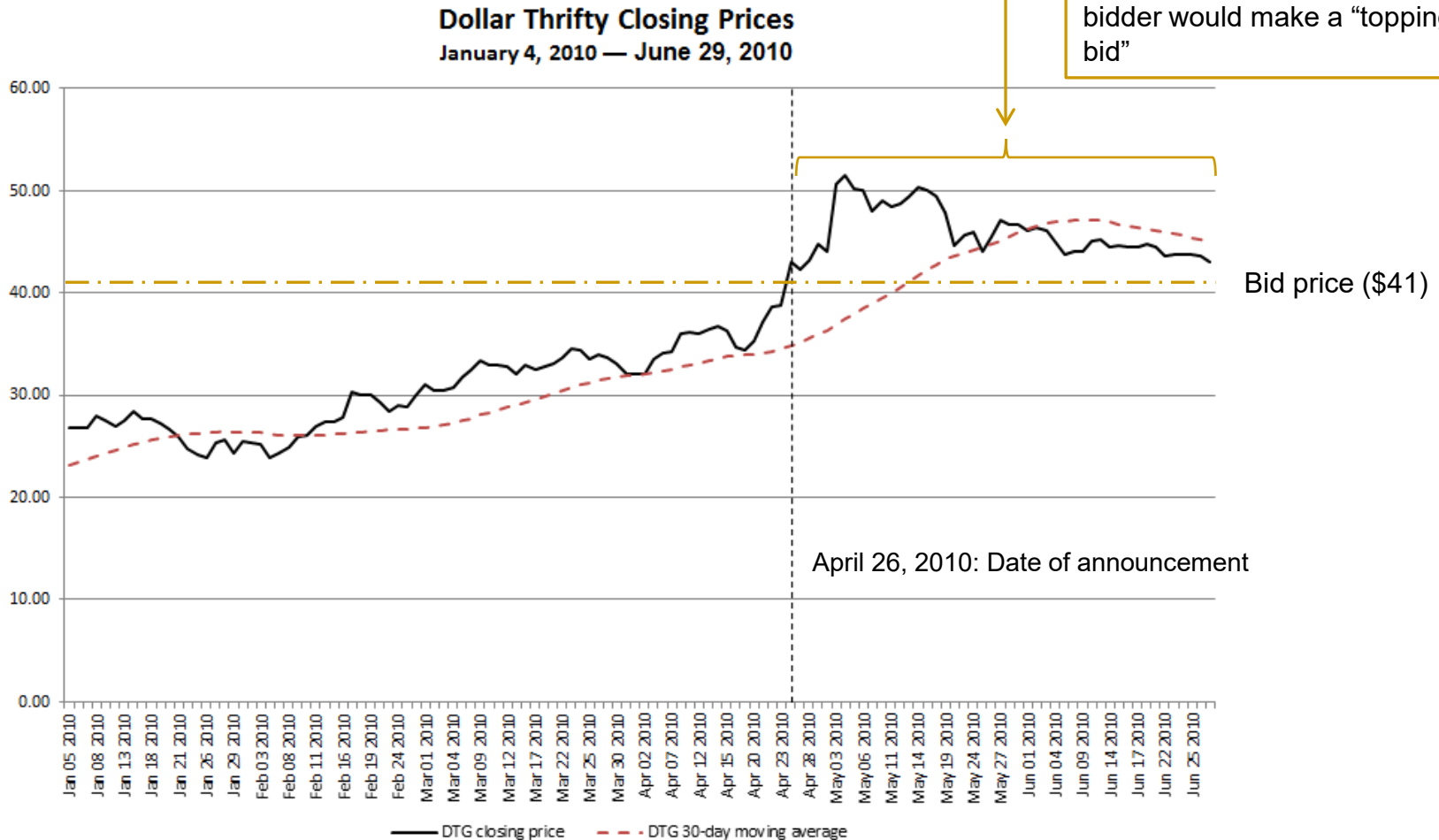
- Why did Hertz pay a deal premium?
 2. Bargaining game over the synergies gain
 - Division of the synergy gains

		Surplus gain
Hertz reservation price	\$71	\$30
Deal price	\$41	
DTAG reservation price	\$32	\$9

- Query: Why did DTAG accept so low a share of the synergies gain?
 - Two most likely possibilities (not exclusive):
 - Hertz was better at playing the bargaining game
 - DTAG estimated the deal synergies significantly below Hertz' estimates

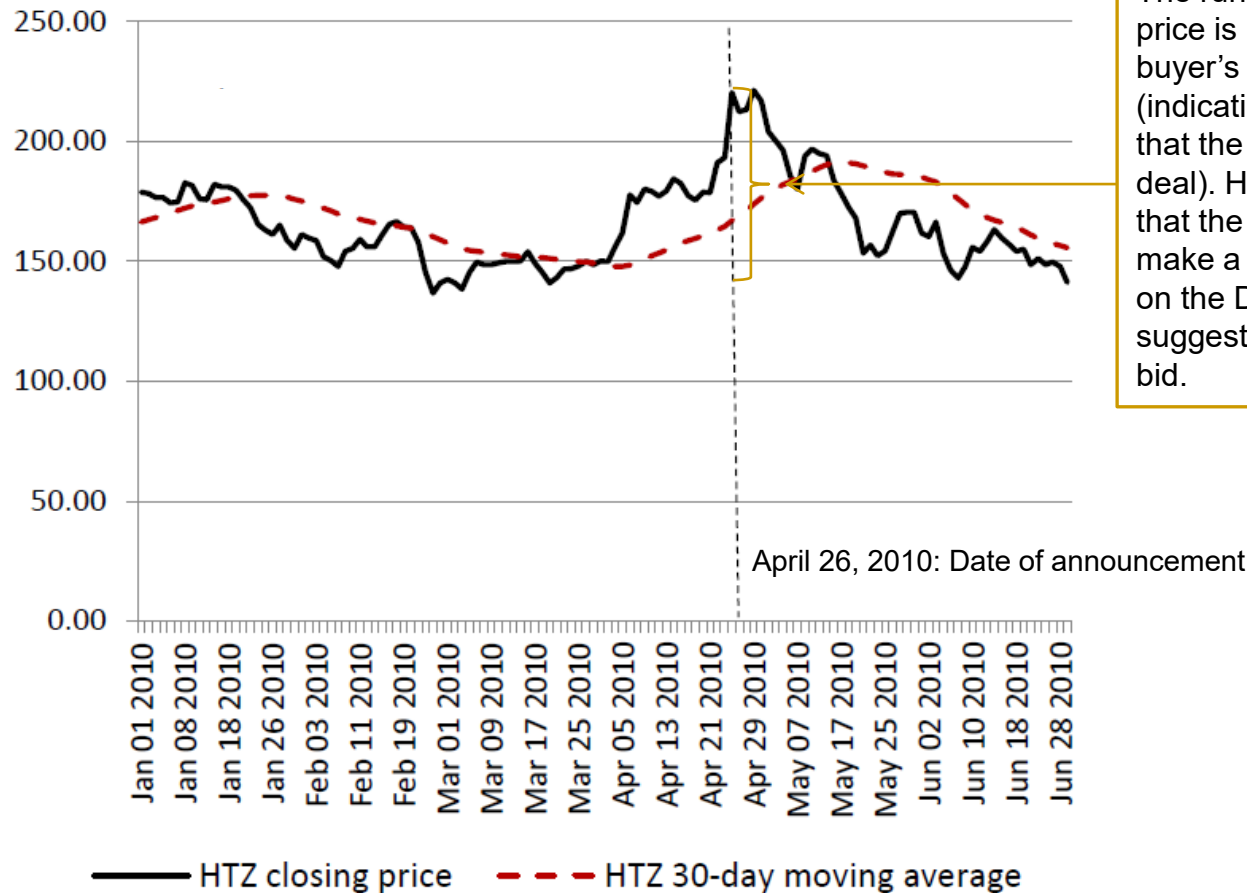
Market reaction

Post-announcement trading prices *above* the Hertz bid price of \$41 indicates that the market expected a second bidder would make a “topping bid”



Market reaction

HTZ Closing Prices
January 4, 2010 — June 29, 2010



The run-up in the buyer's stock price is unusual. More often, the buyer's stock falls in price (indicating that the market believes that the buyer has overvalued the deal). Here, the run-up indicates that the market expects Hertz to make a significant amount of money on the DTAG deal at \$41. This also suggests the possibility of a topping bid.

Class 8 Homework Assignment

Class 8 homework assignment

■ The problem

- ❑ On June 16, 2021, the DOJ has sued to block the Aon/WTW deal
- ❑ The trial court said it would likely deliver a decision in February 2022
- ❑ The drop date date in the merger agreement is September 9, 2021
- ❑ If the deal does not close for antitrust reasons, Aon will pay WTW an antitrust reverse termination fee of \$1 billion
- ❑ Aon wants to litigate the merits

Should WTW terminate the agreement on the September 9 drop dead date or extend it to February and litigate?

Class 8 homework assignment

■ Strategy

1. Identify WTW's options
2. Identify the possible outcome(s) for each option
3. Calculate WTW's expected payoff (in PDV) for each outcome
4. Select the option with the highest expected payoff

Class 8 homework assignment

3. Identify the expected payoffs for each outcome

Option
1. Do not extend drop dead date
2. Extend drop dead date

Class 8 homework assignment

3. Identify the expected payoffs for each outcome

Option	Outcomes	Payoff
1. Do not extend drop dead date	Terminate agreement on drop dead date (September 9, 2021)	Receive antitrust reverse termination fee (ARTF)

Class 8 homework assignment

3. Identify the expected payoffs for each outcome

Option	Outcomes	Payoff
1. Do not extend drop dead date	Terminate agreement on drop dead date (September 9, 2021)	Receive antitrust reverse termination fee (ARTF)
2. Extend drop dead date	a. Litigate and lose	i. Loss of litigation costs
		ii. PDV of ARTF received in February
		iii. Further loss of going concern value

Class 8 homework assignment

3. Identify the expected payoffs for each outcome

Option	Outcomes	Payoff
1. Do not extend drop dead date	Terminate agreement on drop dead date (September 9, 2021)	Receive antitrust reverse termination fee (ARTF)
2. Extend drop dead date	a. Litigate and lose	i. Loss of litigation costs
		ii. PDV of ARTF received in February
		iii. Further loss of going concern value
	b. Litigate and win	i. Loss of litigation costs
		ii. Gain of deal premium on closing of the deal
		iii. Gain of pro rata share of synergies as Aon shareholders

To be sure we are comparing apples to apples, calculate the PDVs as of the drop dead date

Class 8 homework assignment

1. Do not extend drop dead date: Terminate agreement
 - Antitrust reverse termination fee = \$1 billion

Payoff for Strategy 1: \$1 billion

Class 8 homework assignment

2. Extend drop dead date and litigate

a. Litigate and lose

- i. Additional litigation costs = $-\$10$ million
- ii. Present discounted value of ARTF received in February 2022 as opposed to September 2021

$$PV = \frac{FV}{(1+r)^n},$$

where

PV is the discounted present value

FV is the future value (here, \$1 billion)

r is the discount rate (here, 5.16% annually or 0.43% monthly)

n is the number of periods (here, 5 months)

Applied:

$$PV = \frac{FV}{(1+r)^n} = \frac{\$1000}{(1+0.0043)^5} = \$978.77 \text{ million}$$

So the loss on the present value of the ARTF for delay is:

$$FV - PV = \$978.77 \text{ million} - \$1000 \text{ million} = -\$21.23 \text{ million}$$

Class 8 homework assignment

2. Extend drop dead date and litigate

a. Litigate and lose

iii. Further loss of going concern value

- ❑ The signing occurred on March 9, 2020, and the drop dead date was 18 months later
- ❑ Most of the damage to WTW's going concern value probably will occur during this 18-month period, with relatively little or no additional damage expected during the additional five months between the drop dead date and the end of the litigation
- ❑ Loss associated with additional diminution in going concern value: **\$0**

Total expected value to WTW shareholders if they litigate and lose:

– \$10 million + \$978.77 million – \$ 0 million = \$968.77 million

For a loss of \$31.23 million compared to terminating on the drop dead date

Class 8 homework assignment

2. Extend drop dead date and litigate

b. Litigate and win

i. Loss of litigation costs = $-\$10$ million

ii. Gain of deal premium on closing of the deal

- The parties' investor presentation states that the WTW shareholders will receive Aon stock valued at \$30 billion in exchange for their WTW shares, yielding a deal premium of 16.2%
- Consequently, the deal premium is about \$4.86 billion¹
- But the deal premium will not be received until February 2022, so it needs to be discounted to the present (i.e., September 2021):

$$PV = \frac{FV}{(1+r)^n} = \frac{\$4860}{(1+0.0043)^5} = \$4756.84 \text{ million}$$

¹ This is not quite right, but I did not give you the information necessary to do the correct calculation. See note 9 in the instructor's answer to the homework assignment for an explanation.

Class 8 homework assignment

2. Extend drop dead date and litigate

b. Litigate and win

iii. Gain of pro rata share of synergies as Aon shareholders

- ❑ The parties anticipate annual run-rate synergies of \$800 million beginning in year 3
- ❑ They also expect gross synergies to be \$267 million in the first year and \$600 million in the second year
- ❑ Attaining these synergies entail transitional costs of \$1.4 billion split equally in the first two years
- ❑ In addition, the companies expect transaction costs of approximately \$200 million and retention costs of up to \$400 million, all to be incurred in the first year
- ❑ The WTW shareholders will hold 37% of the combined company and hence be entitled to 37% of the combined firm's deal synergies

Class 8 homework assignment

2. Extend drop dead date and litigate

b. Litigate and win

- iii. Gain of pro rata share of synergies as Aon shareholders:

WTW pro rata 37% share of 10 years of net synergies discounted at 8%¹

= \$1072.72 million

¹ I used 8% rather than WTW's WACC of 5.16% given that interest rates could be considerably higher in the future than today and the risk that the combined company will not achieve the anticipated \$800 million in run-rate synergies and the risk that the nominal value of the synergies will decline over time with changes in products or the competitive landscape.

Combined Company Synergy NPV (discounted at 8%)						
Year	Synergies	Costs	Net CF	PV	NPV	37%
1	\$267.00	\$1,300.00	(\$1,033.00)	(\$956.48)	(\$956.48)	(\$353.90)
2	\$600.00	\$700.00	(\$100.00)	(\$85.73)	(\$1,042.22)	(\$385.62)
3	\$800.00	\$0.00	\$800.00	\$635.07	(\$407.15)	(\$150.65)
4	\$800.00	\$0.00	\$800.00	\$588.02	\$180.87	\$66.92
5	\$800.00	\$0.00	\$800.00	\$544.47	\$725.34	\$268.38
6	\$800.00	\$0.00	\$800.00	\$504.14	\$1,229.48	\$454.91
7	\$800.00	\$0.00	\$800.00	\$466.79	\$1,696.27	\$627.62
8	\$800.00	\$0.00	\$800.00	\$432.22	\$2,128.48	\$787.54
9	\$800.00	\$0.00	\$800.00	\$400.20	\$2,528.68	\$935.61
10	\$800.00	\$0.00	\$800.00	\$370.55	\$2,899.24	\$1,072.72
11	\$800.00	\$0.00	\$800.00	\$343.11	\$3,242.34	\$1,199.67
12	\$800.00	\$0.00	\$800.00	\$317.69	\$3,560.04	\$1,317.21
13	\$800.00	\$0.00	\$800.00	\$294.16	\$3,854.19	\$1,426.05
14	\$800.00	\$0.00	\$800.00	\$272.37	\$4,126.56	\$1,526.83
15	\$800.00	\$0.00	\$800.00	\$252.19	\$4,378.76	\$1,620.14
16	\$800.00	\$0.00	\$800.00	\$233.51	\$4,612.27	\$1,706.54
17	\$800.00	\$0.00	\$800.00	\$216.22	\$4,828.48	\$1,786.54
18	\$800.00	\$0.00	\$800.00	\$200.20	\$5,028.68	\$1,860.61
19	\$800.00	\$0.00	\$800.00	\$185.37	\$5,214.05	\$1,929.20
20	\$800.00	\$0.00	\$800.00	\$171.64	\$5,385.69	\$1,992.71

Class 8 homework assignment

2. Extend drop dead date and litigate
 - b. Litigate and win

Total gain to WTW shareholders if they litigate and win:

$$- \$10 \text{ million} + \$4756.84 \text{ million} + \$1072.72 \text{ million} = \$5819.56 \text{ million}$$

Class 8 homework assignment

4. Compare payoffs

Option	Outcomes	Payoff
1. Do not extend drop dead date	Terminate agreement on drop dead date (September 9, 2021)	+ \$1000 million ARTF
2. Extend drop dead date	a. Litigate and lose	+ \$969 million
	b. Litigate and win	+ \$5819.56 million

- ❑ The difference in payoffs between taking the ARTF in September and losing the litigation in February is \$31.32 million
- ❑ The difference in payoffs between taking the ARTF in September and winning the litigation and closing the deal in February is about \$4.82 billion

So the question is whether the WTW shareholders would be willing to risk losing \$31.32 million in order to gain about \$4.82 billion

Class 8 homework assignment

■ What is the tipping point?

- Let p be WTW's (subjective) probability of winning the case and closing the deal
- If WTW was risk neutral and maximized expected value, then the tipping probability p^* would equate the expected value of extending the drop dead date with the expected value of terminating on September 9:

$$\begin{aligned} E(\text{extending}) &= E(\text{terminating}) \\ (p^*)(\text{extending and winning}) + (1-p^*)(\text{extending and losing}) &= E(\text{terminating}) \\ (p^*)(5819.56) + (1-p^*)(969) &= 1000 \end{aligned}$$

- Solving for p^* , the tipping point is 0.63%

Bottom line: WTW should terminate and take the \$1 billion ARTF on September 9 only if it believes that the probability of winning is less than 0.63%—EXTEND THE DROP DEAD DATE

Class 8 homework assignment

■ What actually happened?



Overview	Stock Information	Investor News	Financial Reports	Events & Presentations
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You are here: [Aon](#) ▶ [About Aon](#) ▶ [Investor Relations](#) ▶ [Investor News](#) ▶ [News Release Details](#)

Aon and Willis Towers Watson Mutually Agree to Terminate Combination Agreement

07/26/2021

[Download this Press Release \(PDF\)](#)

DUBLIN, July 26, 2021 /PRNewswire/ -- [Aon plc](#) (NYSE: AON) and [Willis Towers Watson](#) (NASDAQ: WLTW) announced today that the firms have agreed to terminate their business combination agreement and end litigation with the U.S. Department of Justice (DOJ). The proposed combination was first announced on March 9, 2020.

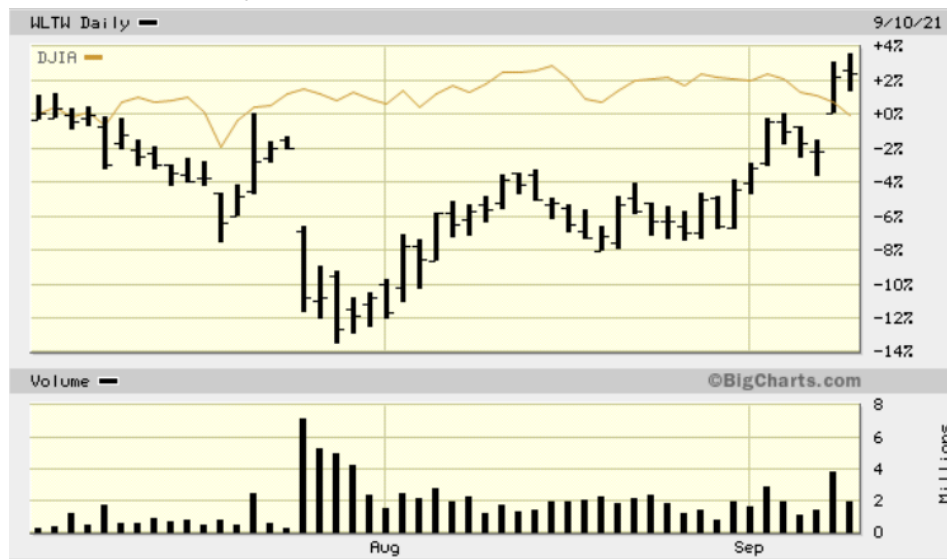
"Despite regulatory momentum around the world, including the recent approval of our combination by the European Commission, we reached an impasse with the U.S. Department of Justice," said Aon CEO Greg Case. "The DOJ position overlooks that our complementary businesses operate across broad, competitive areas of the economy. We are confident that the combination would have accelerated our shared ability to innovate on behalf of clients, but the inability to secure an expedited resolution of the litigation brought us to this point."

. . .

Class 8 homework assignment

- How did the market react?
 - WTW stock dropped 9.0% the day of the announcement

Percentage Change in WTW Closing Prices
July 1, 2021 – September 10, 2021



Arbs with WTW shares were betting on an extension to litigate!

Class 8 homework assignment: Bonus question

Should Aon agree to extend the drop dead date in order to litigate, or should it terminate the deal on September 9 and pay WTW the \$1 billion breakup fee?

❑ Assume:

- Aon will pay \$15 million in out-of-pocket expenses for its part in the litigation
- On July 15, 2021, Aon's weighted average cost of capital (WACC) was 5.8% and its return on invested capital (ROIC) was 8.47%

❑ Analysis

■ Options

- ❑ Terminate and pay WTW \$1 billion ARTF
- ❑ Extend and litigate
 - Litigate and lose
 - Litigate and win

Class 8 homework assignment: Bonus question

1. Do not extend drop dead date: Terminate agreement
 - Pay antitrust reverse termination fee = $-\$1$ billion

Aon payoff for Strategy 1: $-\$1$ billion

Class 8 homework assignment: Bonus question

2. Extend drop dead date and litigate

a. Litigate and lose

- i. Loss of litigation costs = $-\$15$ million
- ii. Present discounted value of ARTF paid in February 2022 as opposed to September 2021

$$PV = \frac{FV}{(1+r)^n} = \frac{-\$1000}{(1+0.0048)^5} = -\$976.34 \text{ million}$$

where

PV is the discounted present value

FV is the future value (here, \$1 billion)

r is the discount rate (here, 5.8% annually or 0.48% monthly)

n is the number of periods (here, 5 months)

So the *gain* to Aon on the value of the ARTF for delay is:

$$FV - PV = \$1000 \text{ million} - \$976.34 = \$23.66 \text{ million}$$

Total loss to Aon shareholders if they litigate and lose:

$$-\$15 \text{ million} - \$976.34 \text{ million} = -\$991.34 \text{ million}$$

For a *gain* of \$8.66 million compared to terminating on the drop dead date

Class 8 homework assignment: Bonus question

2. Extend drop dead date and litigate

b. Litigate and win

- i. Loss of litigation costs = -\$15 million
- ii. Value of the deal premium: \$4800 million delayed for five months at Aon's 5.8% WACC:

$$PV = \frac{FV}{(1+r)^n} = \frac{\$4860}{(1+0.0048)^5} = \$4,686.44 \text{ million}$$

Class 8 homework assignment: Bonus question

2. Extend drop dead date and litigate

b. Litigate and win

- iii. Gain of pro rata share of synergies as Aon shareholders:

Aon pro rata 63% share of 10 years of net synergies discounted at 8%¹
= \$1826.52 million

Combined Company Synergy NPV (discounted at 8%)						
Year	Synergies	Costs	Net CF	PV	NPV	63%
1	\$267.00	\$1,300.00	(\$1,033.00)	(\$956.48)	(\$956.48)	(\$602.58)
2	\$600.00	\$700.00	(\$100.00)	(\$85.73)	(\$1,042.22)	(\$656.60)
3	\$800.00	\$0.00	\$800.00	\$635.07	(\$407.15)	(\$256.50)
4	\$800.00	\$0.00	\$800.00	\$588.02	\$180.87	\$113.95
5	\$800.00	\$0.00	\$800.00	\$544.47	\$725.34	\$456.96
6	\$800.00	\$0.00	\$800.00	\$504.14	\$1,229.48	\$774.57
7	\$800.00	\$0.00	\$800.00	\$466.79	\$1,696.27	\$1,068.65
8	\$800.00	\$0.00	\$800.00	\$432.22	\$2,128.48	\$1,340.94
9	\$800.00	\$0.00	\$800.00	\$400.20	\$2,528.68	\$1,593.07
10	\$800.00	\$0.00	\$800.00	\$370.55	\$2,899.24	\$1,826.52
11	\$800.00	\$0.00	\$800.00	\$343.11	\$3,242.34	\$2,042.68
12	\$800.00	\$0.00	\$800.00	\$317.69	\$3,560.04	\$2,242.82
13	\$800.00	\$0.00	\$800.00	\$294.16	\$3,854.19	\$2,428.14
14	\$800.00	\$0.00	\$800.00	\$272.37	\$4,126.56	\$2,599.73
15	\$800.00	\$0.00	\$800.00	\$252.19	\$4,378.76	\$2,758.62
16	\$800.00	\$0.00	\$800.00	\$233.51	\$4,612.27	\$2,905.73
17	\$800.00	\$0.00	\$800.00	\$216.22	\$4,828.48	\$3,041.94
18	\$800.00	\$0.00	\$800.00	\$200.20	\$5,028.68	\$3,168.07
19	\$800.00	\$0.00	\$800.00	\$185.37	\$5,214.05	\$3,284.85
20	\$800.00	\$0.00	\$800.00	\$171.64	\$5,385.69	\$3,392.99

¹ I used 8% rather than Aon's WACC of 5.8% for the same reason I used 8% in calculating the PDV for WTW's share of synergies.

Class 8 homework assignment: Bonus question

2. Extend drop dead date and litigate
 - b. Litigate and win

Total gain to Aon shareholders if they litigate and win:

$$- \$15 \text{ million} - \$4686.44 \text{ million} + \$1826.52 \text{ million} = -\$2874.92 \text{ million}$$

Class 8 homework assignment: Bonus question

■ Compare payoffs

Option	Outcomes	Payoff
1. Do not extend drop dead date	Terminate agreement on drop dead date (September 9, 2021)	– \$1000 million ARTF
2. Extend drop dead date	a. Litigate and lose	– \$991.34 million
	b. Litigate and win	– \$2875 million

- The difference in payoffs between paying ARTF in September and losing the litigation in February is \$8.66 million
- The difference in payoffs between taking the ARTF in September and winning the litigation and closing the deal in February is -\$1.875 billion

So unless Aon is essentially certain it will lose the litigation, it should terminate the deal and pay the \$1 billion ARTF to WTW

Class 8 homework assignment: Bonus question

■ What is the tipping point?

- Let p be Aon's (subjective) probability of winning the case and closing the deal
- If Aon was risk neutral and maximized expected value, then the tipping probability p^* would equate the expected value of extending the drop dead date with the expected value of terminating on September 9:

$$\begin{aligned} E(\text{extending}) &= E(\text{terminating}) \\ (p^*)(\text{extending and winning}) + (1-p^*)(\text{extending and losing}) &= E(\text{terminating}) \\ (p^*)(-2875) + (1-p^*)(-991.34) &= -1000 \end{aligned}$$

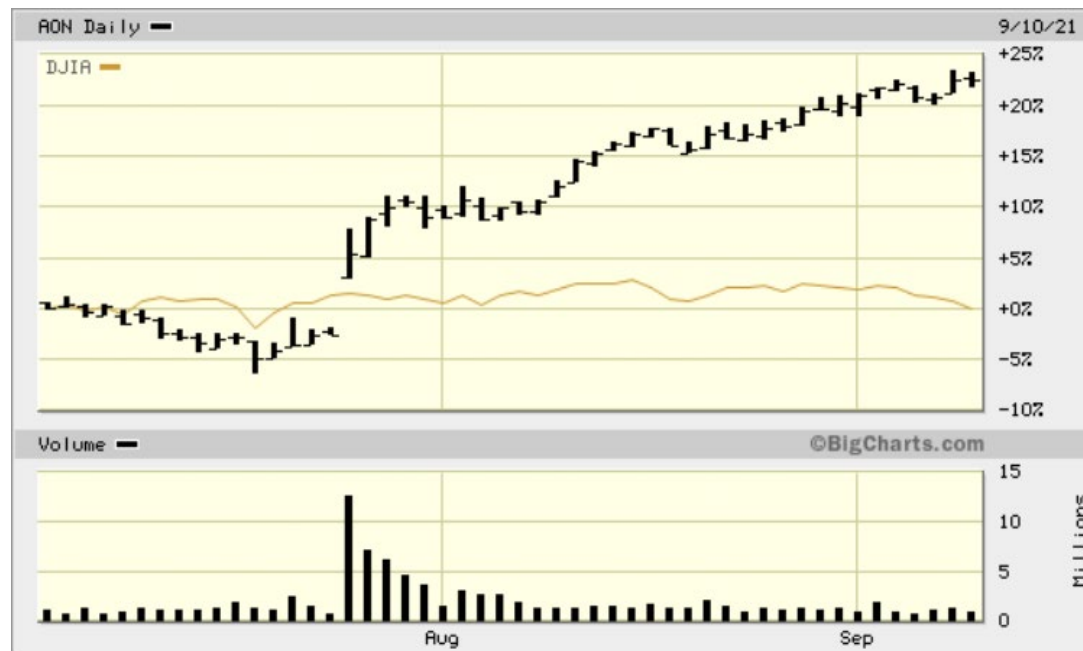
- Solving for p^* , the tipping point is 0.46%

Bottom line: Aon should terminate and pay the \$1 billion ARTF on September 9 if it believes that the probability of winning is greater than 0.46%

Class 8 homework assignment: Bonus question

- How did the market react to the deal termination?
 - Aon stock increased 8.2% the day of the announcement and continued to increase in the following days

Percentage Change in Aon Closing Prices
July 1, 2021 – September 10, 2021



Arbs with Aon stock expected an extension for litigation but were delighted that the deal terminated

Class 8 homework assignment: Bonus question

- What is going on here? Why did Aon do the deal at all?
 - The Aon investor presentation anticipates—

“over \$10 billion of expected shareholder value, from the capitalized value of expected pre-tax synergies and net of expected one time transaction, retention and integration costs.”

- A NPV of \$10 billion for the combined company yields a NPV benefit to the Aon shareholders of \$6.3 billion *at the time of announcement* given Aon’s 63% ownership of the combined company:

$$\text{\$6,300 million} - \text{\$4,800 million} - \text{\$15 million} = \text{+\$1,485 million}$$

Class 8 homework assignment: Bonus question

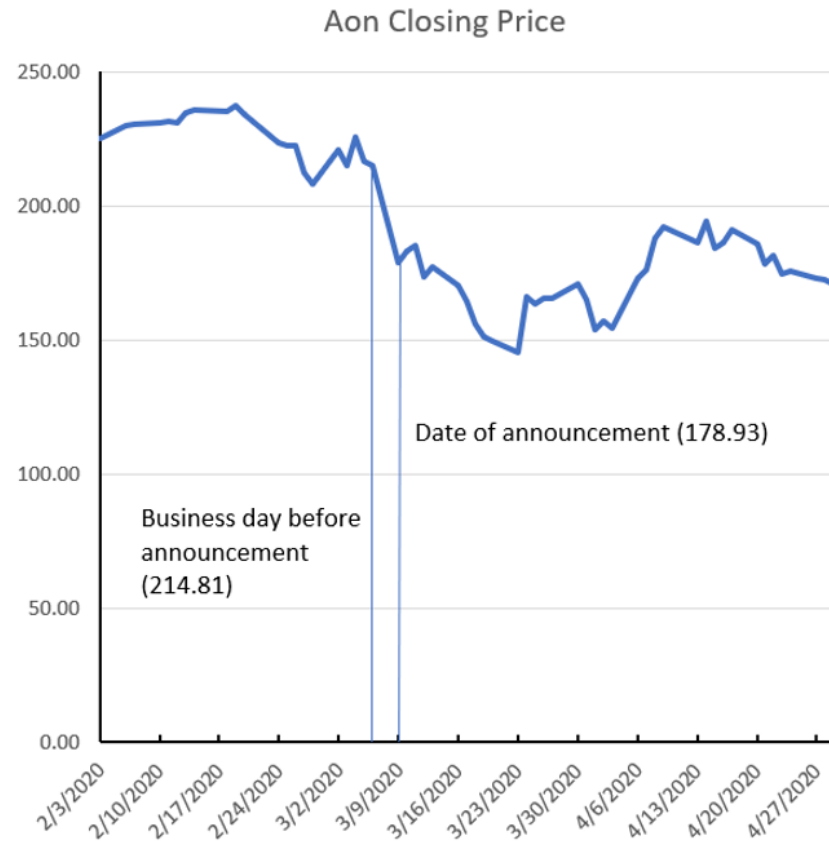
- What is going on here? Why did Aon do the deal at all?
 - *Query:* Does the \$10 billion in the present value of synergy gains net of costs make sense?
 - Implies a PDV synergies gain before transition costs of \$12 billion
 - At \$800 million/year
 - At a 0% discount rate, would take 15 years to earn \$12 billion
 - At an 8% discount rate, would take over 100 years to cover the deal premium
 - How did Aon get \$10 billion in net PDV?
 - Consider a perpetual annuity of \$800 million/year. What discount rate would produce a PDF of \$12 billion (before costs)?

$$PV = \frac{A}{r}$$
$$12000 = \frac{800}{r} \rightarrow r = 6.7\%$$

- A discount rate of 6.7% is—
 - 87 basis points greater than Aon's WACC of 5.8%
 - 1800 basis points lower than Aon's ROIC of 8.47%
- Suggests that a NPV synergy gain of \$10 billion for the combined company is unrealistically high and that, when properly evaluated, the deal did not make sense from the beginning for Aon

Class 8 homework assignment: Bonus question

- The market agreed the deal was a loser:



Aon stock dropped 16.7% on the day of announcement

Class 8 homework assignment: Bonus question

- Moreover, Aon stock did not recover over time when compared to the Dow Jones Industrial Average



- Between of the announcement (March 9, 2020) and the date before termination (July 24, 2021)—
 - Aon stock rose 17.1%
 - The DJIA rose 35.9%

Class 9-10 slides

Unit 8. Competition Economics

Part 1. Demand, Costs, and Profits

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October 4, 2022

0. Opening Thoughts

Economics is common sense made difficult

To hide the fact that their discipline is no more than common sense, economists have created a thicket of esoteric mumbo-jumbo.
—Mail & Guardian (Mar. 13, 1998)

Economic science is but the working of common sense aided by appliances of organized analysis and general reasoning, which facilitate the task of collecting, arranging, and drawing inferences from particular facts.
—Alfred Marshall, *Principles of Economics* (1890)

Antitrust and economics

- The role of economics in antitrust
 - In per se violations, no need to prove actual or likely anticompetitive effect
 - So only the role for economics is proof of damages
 - In rule of reason violations, need to prove actual or likely anticompetitive effect
 - Economics is critical to predicting competitive effects
 - But very few rule of reason cases are investigated or litigated
 - Challenges are to practices that are already in place and can observe competitive effects
 - But still need economics for assessing the “but for” world
 - In monopolization or attempted monopolization cases, need to prove anticompetitive exclusionary conduct
 - Some role for economics in identifying anticompetitive exclusionary conduct
 - But relatively few Section 2 cases are investigated or litigated
 - Challenges are to practices that are already in place and can observe competitive effects
 - But still need economics for assessing the “but for” world
 - In merger cases, need to prove actual or likely anticompetitive effect
 - Economics is essential (under current law)
 - Many mergers are investigated and challenged
 - With the HSR Act, almost all are investigated prior to closing when likely effects must be predicted and not observed
 - Economics provides the principal tool for predicting likely future competitive effects both with and without the merger

More on motivation

■ The purpose of merger antitrust law

- Section 7 of the Clayton Act prohibits mergers and acquisitions that “may be substantially to lessen competition, or to tend to create a monopoly”¹
- In modern terms, a transaction may substantially lessen competition when it threatens, with a reasonable probability, to create or facilitate the exercise of market power to the harm of consumers
- Operationally, a transaction harms consumer when it result in—

- Higher prices
- Reduced market output
- Reduced product or service quality in the market as a whole, *or*
- Reduced rate of technological innovation or product improvement in the market

} Merger antitrust analysis typically focuses on price effects (see Unit 2)

compared to what would have been the case in the absence of the transaction (the “but for” world) and without any offsetting consumer benefits

Consequently, a central focus in merger antitrust law is the effect a merger is likely to have on the profit-maximizing incentives and ability of the merged firm to raise price in the wake of the transaction. In the first instance, this requires us to know how a profit-maximizing firm operates. The basic tools to enable us to do this analysis is the subject of this unit. These same tools are also fundamental to an understanding of merger antitrust law defenses.

¹ 15 U.S.C. § 18.

Antitrust economics

- Three starting points
 1. The *law of demand*: Demand curves are downward sloping
 2. *Profit maximization*: Firms act to maximize their profits
 3. *Single price markets*: Identical products sell at the same price in the market
 - That is, firms cannot price discriminate among customers
- With these starting points, economics enables us to—
 1. Analyze the incentives and abilities of a profit-maximizing firm given the demand curve facing the firm (the *residual demand curve*)
 2. Analyze how the firm's residual demand curve might change with a merger
 3. Predict how the merged firm might act differently postmerger from the two merging firms premerger
 4. Predict the consumer welfare consequences of this change in behavior

Profit maximization

To begin the analysis, we must understand how a firm makes its choices of price, production level, and other operating variables to maximize its profits

Profit maximization

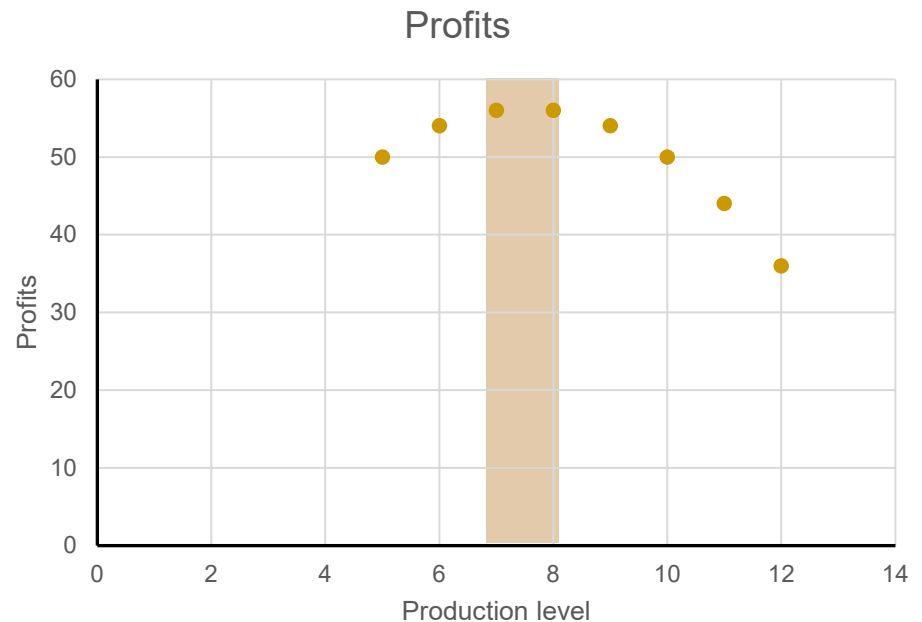
- Consider a very simple problem:
 - Avco makes widgets at a cost of \$5 each
 - When Avco makes 5 widgets, it can sell out at a price of \$15 per widget. Since Avco makes \$10 on each widget, Avco makes profits of \$50
 - Avco is thinking of increasing its production. It will do so only if this will increase its profits.
 - If Avco makes 6 widgets, it must drop its price to \$14 to sell out. Since Avco makes \$9 on each widget, Avco would now make profits of \$54. Avco should increase its production.
 - Should Avco increase its production even more?
 - If Avco makes 7 widgets, it must drop its price to \$13 to sell out. Since Avco makes \$8 on each widget, Avco would now make profits of \$56.
 - If Avco makes 8 widgets, it must drop its price to \$12 to sell out. Since Avco makes \$7 on each widget, Avco would now make profits of \$56.
 - If Avco makes 9 widgets, it must drop its price to \$11 to sell out. Since Avco makes \$6 on each widget, Avco would now make profits of \$54.
 - If Avco makes 10 widgets, it must drop its price to \$10 to sell out. Since Avco makes \$5 on each widget, Avco would now make profits of \$50.
 - If Avco makes 11 widgets, it must drop its price to \$9 to sell out. Since Avco makes \$4 on each widget, Avco would now make profits of \$44.

So Avco should increase its production to 7 (or 8) widgets in order to maximize its profits

Profit maximization

- We can see this on a graph:

Quantity	Price	Revenues	Cost	Profits
5	15	75	25	50
6	14	84	30	54
7	13	91	35	56
8	12	96	40	56
9	11	99	45	54
10	10	100	50	50
11	9	99	55	44
12	8	96	60	36



Profit maximization

- Let's look at this in another way that better illustrates the underlying economics
 - If Avco were to increase its production from 5 units to 6 units and drop its price from \$15 to \$14, two things would happen:
 1. Avco would gain an additional sale, *and*
 2. Avco would have to lower its price on all the units it would sell to clear the market
 - These two effects would have two consequences for Avco's profits:
 1. On the customer Avco gained, Avco would make an additional profit of \$9
 - Additional sale of 1 unit times the profit margin of \$9 (at a sales price of \$14 and a unit cost of \$5) equals \$9 profit gain
 2. On its original sale, it would have to lower the price by \$1 and so reduce its profits on those sales by \$5
 - Original sale price of \$15 minus the new sales price of \$14 equals a \$1 loss on each original sale
 - Five original sales times \$1 loss on each sale equals a \$5 profit loss
 - The change in Avco's profits is then:
 - The gain in profits from the additional sales at the new price (\$9)
 - *Minus* the loss in profits from lowering the price on the original sales (\$5)
 - For a net profit gain of \$4

*Rule: Avco should increase its production
whenever the incremental profit gain is positive*

Profit maximization

- Let's look at this in another way that better illustrates the underlying economics
 - Now if Avco were to increase its production from 10 units to 11 units and drop its price from \$10 to \$9, the same two things would happen:
 1. Avco would gain an additional sale
 2. Avco would have to lower its price on all the units it would sell
 - These two effects would have two consequences for Avco's profits:
 1. On the customer Avco gained, Avco would make an additional profit of \$4
 - Additional sale of 1 unit times the profit margin of \$4 (at a sales price of \$9 and a unit cost of \$5) equals \$4 profit gain
 2. On its original sale, it would have to lower the price by \$1 and so reduce profits on those sales by \$10
 - Original sale price of \$10 minus the new sales price of \$9 equals \$1 loss on each original sale
 - Ten original sales times \$1 loss on each sale equals a \$10 profit loss
 - The change in Avco's profits is then:
 - The gain in profits from the additional sales at the new price (\$4)
 - Minus the loss in profits from lowering the price on the original sales (\$10)
 - For a net profit loss of \$6
 - Indeed, running the same analysis on a decrease in production from 10 units to 9 units would show that Avco would increase its profits

*Rule: Avco should decrease its production
whenever the incremental profit gain is negative*

Profit maximization

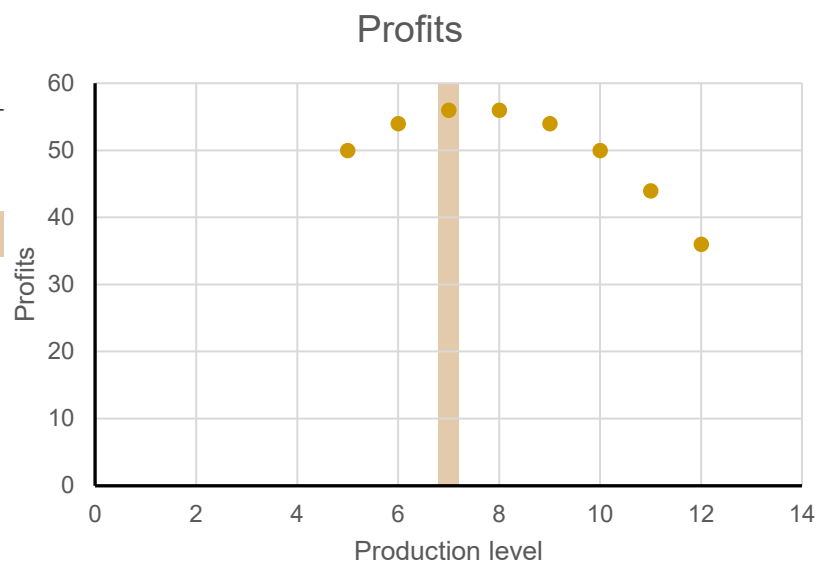
- Bottom line:

Avco maximizes its profit when its incremental profit is zero

- *Incremental profit* is the profit earned on selling the *next* unit

- We can see this on the chart:

Quantity	Price	Revenues	Cost	Incremental	
				Profits	Gain
5	15	75	25	50	4
6	14	84	30	54	2
7	13	91	35	56	0
8	12	96	40	56	-2
9	11	99	45	54	-4
10	10	100	50	50	-6
11	9	99	55	44	-8
12	8	96	60	36	



Profit maximization

■ Some definitions

- *Marginal sales*: Sales that are lost with an increase of one unit in price
 - *Marginal customers* are the customers connected with marginal sales
- *Inframarginal sales*: Original sales that are retained when price increases
 - *Inframarginal customers* are the customers connected with inframarginal sales
- *Marginal profit*: The net profits a firm would make by increasing its production by one unit
 - May be positive or negative
 - *Incremental profits* are the net profits a firm would make increasing its production by some specified amount (which may be more than one unit)
- *Marginal revenue*: The net revenue a firm would earn by increasing its production by one unit
 - May be positive or negative
 - *Incremental revenue* are the net revenues a firm would earn increasing its production by some specified amount (which may be more than one unit)
- *Marginal cost*: The net cost to the firm of increasing its production by one unit
 - Always positive
 - *Incremental costs* are the costs a firm would incur by increasing its production by some specified amount (which may be more than one unit)

Profit maximization

- Some important relationships
 1. At a profit maximum, marginal profits are zero
 2. Marginal profit is equal to marginal cost minus marginal revenue
 3. Therefore, to maximize profits, a firm operates so as to set its marginal revenue equal to its marginal cost
 4. For a linear inverse demand curve of the form $p = a + bq$, the marginal revenue curve is $mr = a + 2bq$
 - The parameter b will always be negative (since the demand curve is downward sloping)
 5. Marginal revenue can be decomposed into two parts:
 - The gross gain in profits from the sale of an additional unit at the new price, *and*
 - The gross loss in the profit margin from the sale of the inframarginal units at the new lower price

What you should be able to do after Part 1

For a firm—

- ❑ Facing a downward sloping residual (inverse) demand curve $p = a + bq$
- ❑ With fixed costs f and constant marginal costs c

1. Determine and graph the profit-maximizing levels of—

- ❑ Output q^*
- ❑ Price p^*
- ❑ Profits π^*

“*” indicates that the variable is at its profit-maximizing level

“Δ” indicates the change in the variable

2. Determine and graph the net incremental revenue for a firm increasing output by some amount Δq , including—

- ❑ The gross gain in revenues from the increase in output, and
- ❑ The gross loss in revenues from the reduction of price for sales at the original price

3. Derive and graph an inverse demand curve given a demand curve

1. Profit Maximization

An observation by Dave Berry

Later on, Newton also invented calculus, which is defined as “the branch of mathematics that is so scary it causes everybody to stop studying mathematics.” That's the whole point of calculus. At colleges and universities, on the first day of calculus, professors go to the board and write huge, incomprehensible “equations” that they make up right on the spot, knowing that this will cause all the students to drop the course and never return to the mathematics building. This frees the professors to spend the rest of the semester playing cards and regaling one another with stories about the “mathematical symbols” they've invented over the years. (“Remember the time Professor Hinkwattle drew a ‘cosine derivative’ that was actually a picture of a squid?” “Yes! Students were diving out the windows! From the fourth floor!”)¹

¹ Dave Berry, *Up in the Air on the Question of Gravity*, Baltimore Sun, Mar. 16, 1997, at 3J.

Profits

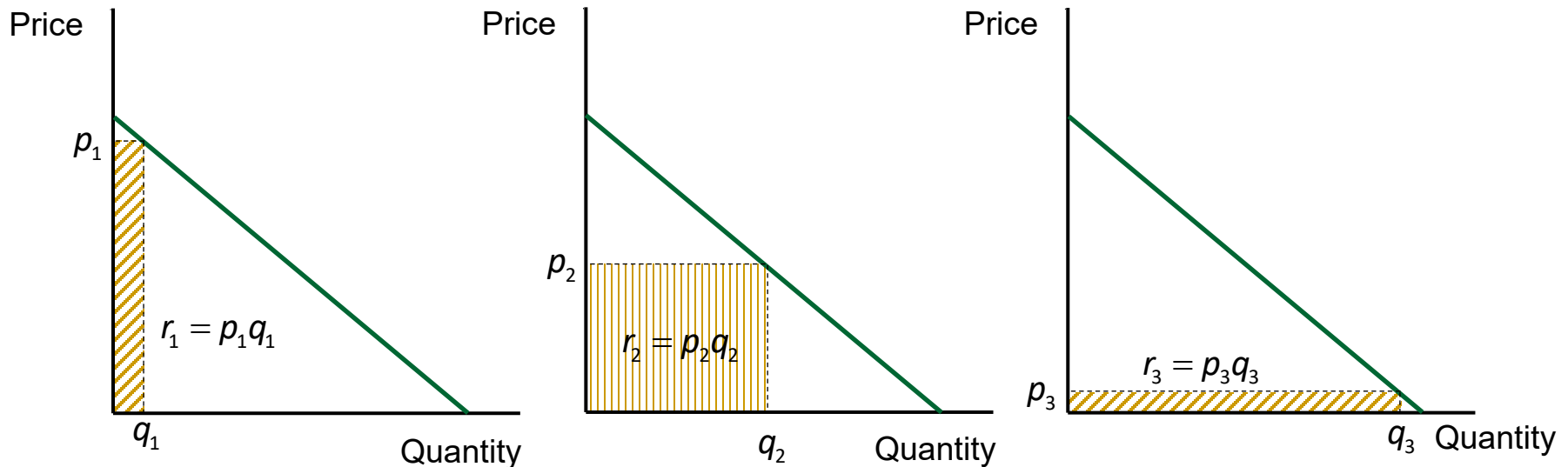
1. When the firm produces output q , its profits $\pi(q)$ are equal to its revenues $r(q)$ minus its total costs $t(q)$:

$$\pi(q) = r(q) - t(q)$$

2. Revenues $r(q)$ are equal to price p times output q :

$$r(q) = pq$$

3. Revenues can be shown as a rectangle in a price-quantity chart:

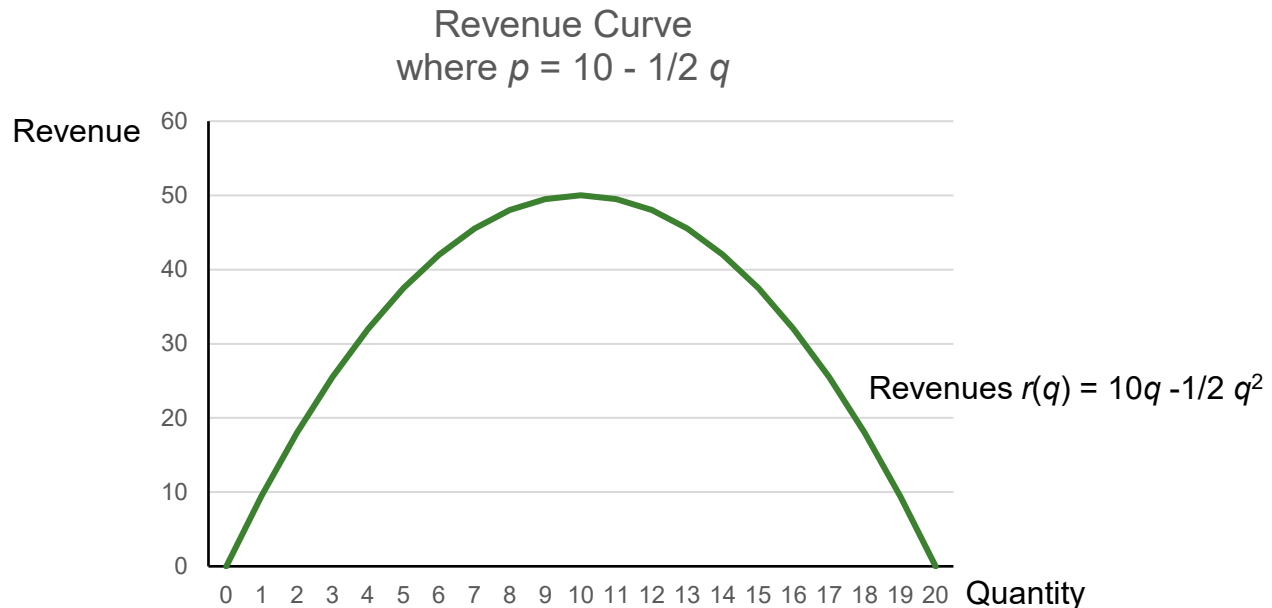


Profits

3. When the firm faces a downward-sloping residual (inverse) demand curve $p = a + bq$:

$$\begin{aligned} r(q) &= pq \\ &= (a + bq)q \\ &= aq + bq^2 \end{aligned}$$

- The graph of the firm's revenues as a function of q is a parabola:



Profits

4. At output q , total costs $t(q)$ are equal to fixed costs f plus variable costs $v(q)$:

$$t(q) = f + v(q)$$

- With *constant marginal costs* c , variable costs $v(q)$ are equal to marginal cost c times output q :

$$v(q) = cq$$

- Then total costs $t(q)$ may be expressed as:

$$\begin{aligned} t(q) &= f + v(q) && \text{generally} \\ &= f + cq && \text{in the case of constant variable costs} \end{aligned}$$

Profits

5. Now we can express total profits $\pi(q)$ as:

$$\begin{aligned}\pi(p) &= r(q) - t(q) \\ &= (a + bq)q - [f + cq] \\ &= [aq + bq^2] - [f + cq]\end{aligned}$$

Since this is a second-order polynomial, its graph is a parabola

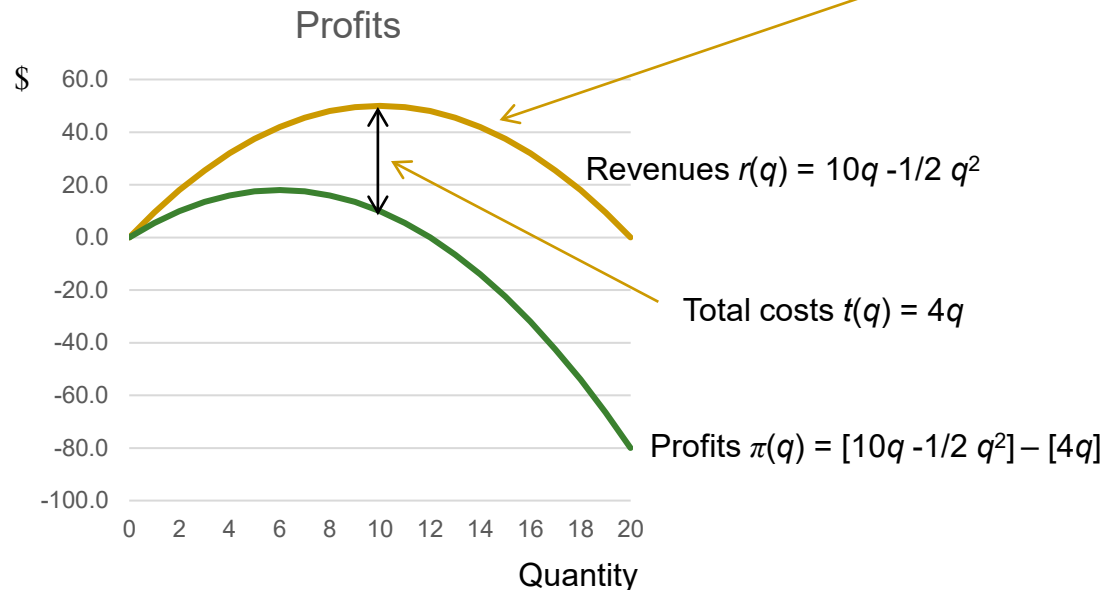
□ Graphically

where

$$p = 10 - \frac{1}{2}q$$

$$f = 0$$

$$c = 4$$



Profit maximization

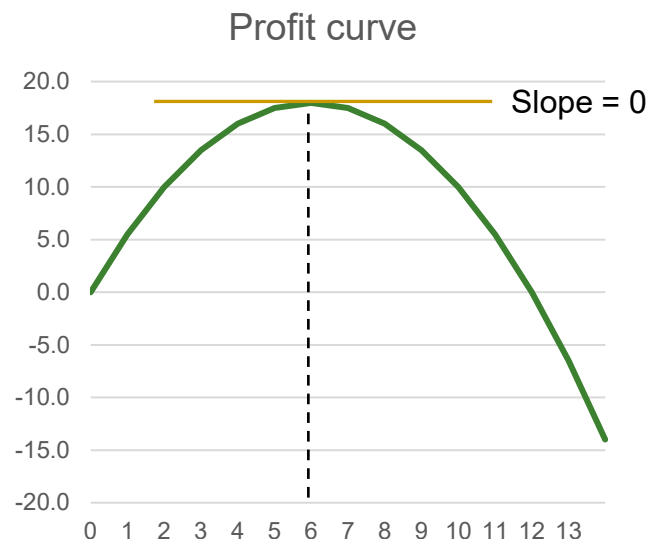
6. The slope at the top of the profit “hill” is zero (a horizontal line):

where

$$p = 10 - \frac{1}{2} q$$

$$f = 0$$

$$c = 4$$



□ Definition

- The *slope of a line* is the change in the *y-values* (Δy) divided by the change in the *x-values* (Δx):

$$\text{Slope} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

- The *slope of a curve* at a point is the slope of the tangent line at that point (as shown above)
 - For calculus geeks: The slope of a curve at a point is the *derivative* of the function at that point

Profit maximization

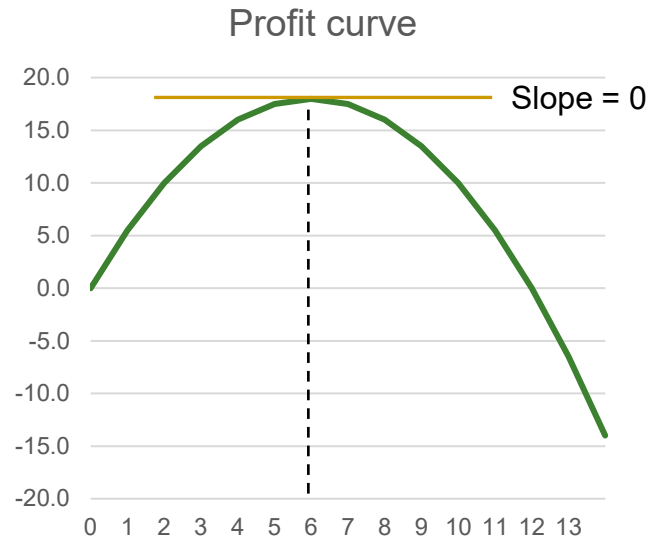
6. The slope at the top of the profit “hill” is zero (a horizontal line):

where

$$p = 10 - \frac{1}{2} q$$

$$f = 0$$

$$c = 4$$



Solve the problem:

- ❑ From the chart, we see that the profit-maximizing output q^* is 6
- ❑ From the inverse demand curve, we can calculate $p^* = p(6) = 10 - (1/2)(6) = 7$
- ❑ $r^* = r(6) = p^*q^* = (7)(6) = 42$
- ❑ $f = 0$ (from the hypothetical)
- ❑ $v^* = v(6) = cq^* = (4)(6) = 24$
- ❑ $t^* = t(q^*) = f + v(q^*) = 0 + 24 = 24$
- ❑ $\pi^* = \pi(q^*) = r^* - t^* = 42 - 24 = 18$

Profit maximization

■ Marginal analysis—Some definitions

- The slope of the revenue curve at an output q is called the *marginal revenue* $mr(q)$
 - Think of marginal revenue as the revenue the firm would earn if it produced one *additional* unit
 - You can also think of the marginal revenue as the *rate of change* in revenue for an increase in output
 - If $r(q) = aq + bq^2$ (the revenue function for a linear inverse demand curve), then:

$$mr(q) = a + 2bq$$

In the continuous case—think of this as the *instantaneous rate of change* of revenue with respect to output

- The slope of the total cost curve at an output q is called the *marginal cost* $mc(q)$
 - Think of marginal cost as the cost the firm would earn if it produced one *additional* unit
 - If $t(q) = f + cq$ (total costs with constant marginal costs), then:

$$mc(q) = c$$

- The slope of the profit curve at an output q is called the *marginal profit* $m\pi(q)$
 - Think of marginal profit as the profit the firm would earn if it produced one additional unit
 - Marginal profit is marginal revenue minus marginal cost:

$$m\pi(q) = mr(q) - mc(q)$$

For calculus geeks: The marginal function is the derivative of the primary function. So, for example, the marginal revenue function is the derivative of the revenue function.

Profit maximization

OPTIONAL but well worthwhile. You should not be satisfied to be told the formula for the marginal revenue curve. You should want to understand its derivation from the definition of marginal revenue. This provides that explanation.

- Marginal analysis—Deriving the marginal revenue function (continuous case)

- If $r(q) = aq + bq^2$ (the revenue function for a linear inverse demand curve), then:

$$mr(q) = a + 2bq$$

in the continuous case (that is, when one unit is infinitesimally small compared to firm output q)

- *Proof:* Let q be the firm's output. Then marginal revenue is technically defined as:

$$mr(q) = \frac{r(q + \Delta q) - r(q)}{\Delta q}, \text{ where } \Delta q = 1$$

Substituting the inverse demand function for r and simplifying:

$$\begin{aligned} mr(q) &= \frac{[a(q + \Delta q) + b(q + \Delta q)^2] - [aq + bq^2]}{\Delta q} \\ &= \frac{[(aq + a\Delta q) + (bq^2 + 2bq\Delta q + b\Delta q^2)] - [aq + bq^2]}{\Delta q} \\ &= \frac{a\Delta q + 2bq\Delta q + b\Delta q^2}{\Delta q} \\ &= a + 2bq + b\Delta q \end{aligned}$$

But if Δq is small compared to q , it may be ignored. So $mr(q) = a + 2bq$ in the continuous case. Q.E.D.

Profit maximization

- First order condition (FOC)

- From Slide 22, we know that profits are maximized at the top of the profit “hill,” which is where the slope of the profit curve is zero
- From Slide 24, we know that the slope of the profit curve at an output q is the marginal profit $m\pi(q)$ evaluated at output q
- From Slide 24, we also know that the marginal profit $m\pi(q)$ is equal to the marginal revenue $mr(q)$ minus the marginal cost $mc(q)$, all evaluated at output q , that is:

$$m\pi(q) = mr(q) - mc(q)$$

- The *first order condition* for a profit-maximizing level of output q^* is that the marginal profit at q^* equals zero, that is:

$$m\pi(q^*) = mr(q^*) - mc(q^*) = 0$$

or equivalently: $mr(q^*) = mc(q^*)$

A profit-maximizing firm sets its production level q so that its marginal revenue is equal to its marginal cost

Profit maximization

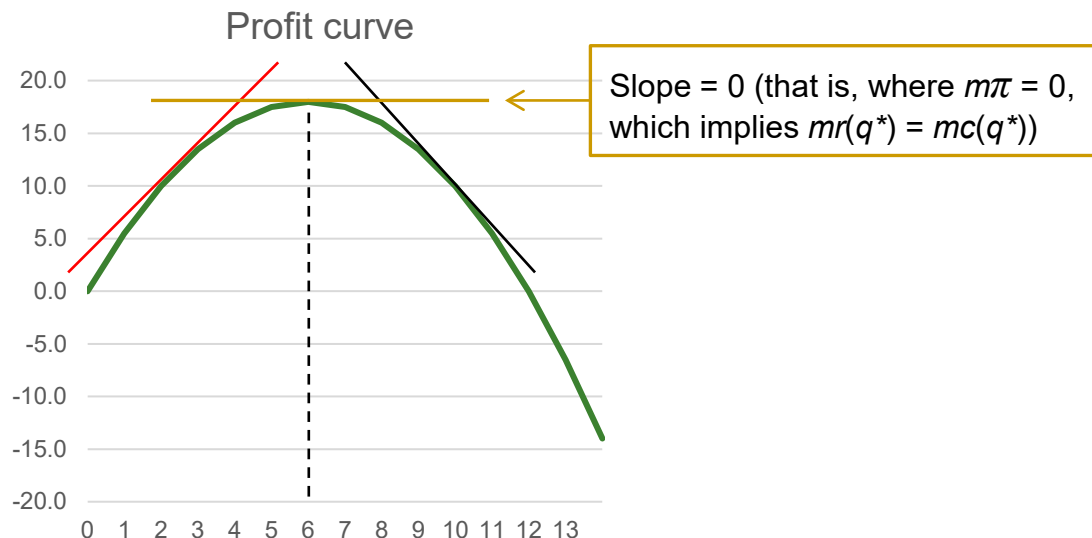
■ First order condition—Example

where

$$p = 10 - \frac{1}{2} q$$

$$f = 0$$

$$c = 4$$



- **Key concept:** Think of the slope as the *instantaneous rate of change* of profits with respect to output
 - If the slope is positive ($m\pi > 0$), then profits are increasing with increases in output
 - If the slope is negative ($m\pi < 0$), then profits are decreasing with increases in output
 - If the slope is zero ($m\pi = 0$), then a change in output in either direction will decrease profits (i.e., the firm is at a profit maximum)

Profit maximization

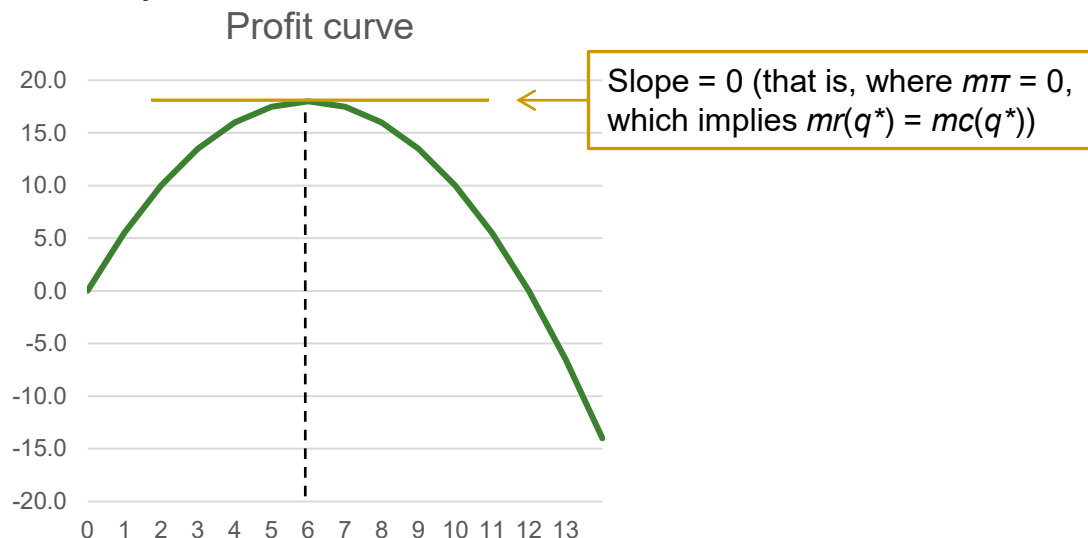
■ First order condition—Example

where

$$p = 10 - \frac{1}{2} q$$

$$f = 0$$

$$c = 4$$



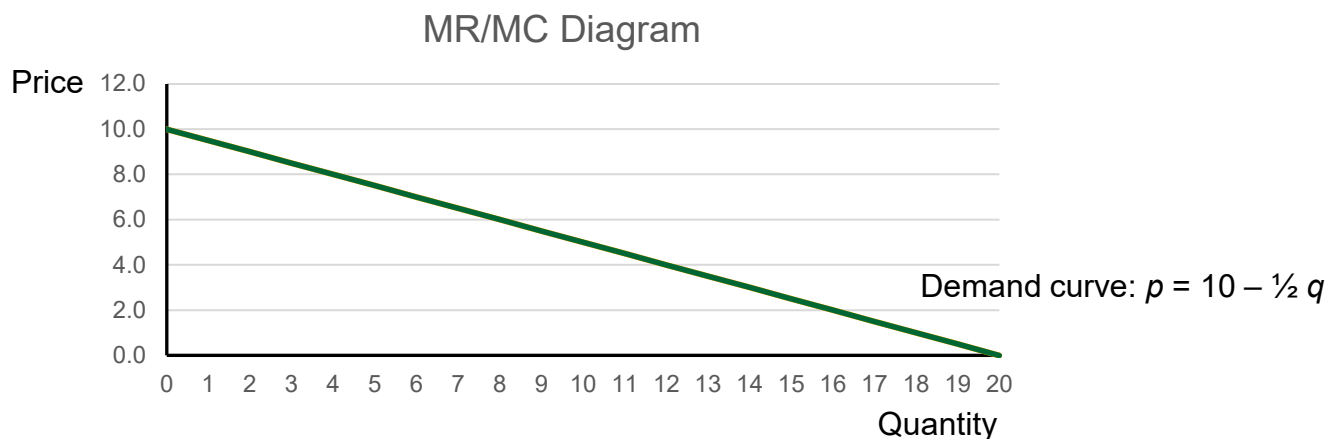
1. $r(q) = p(q)q = (10 - \frac{1}{2} q)q = 10q - \frac{1}{2} q^2$
2. $mr(q) = 10 - q$ (from the formula on Slide 14)
3. $mc(q) = 4$ (from the hypothetical)
4. FOC: $mr(q^*) = mc(q^*)$
So $10 - q^* = 4$ or $q^* = 6$ (as shown in the diagram)
5. $p^* = p(q^*) = 10 - \frac{1}{2} q^*$
 $= 10 - (\frac{1}{2})(6) = 7$ (from the inverse demand curve)

Profit maximization

■ Marginal revenue/marginal cost diagrams

- Will build this step-by-step in five steps

→ a. Consider an (inverse) demand curve: $p = 10 - \frac{1}{2} q$



Profit maximization

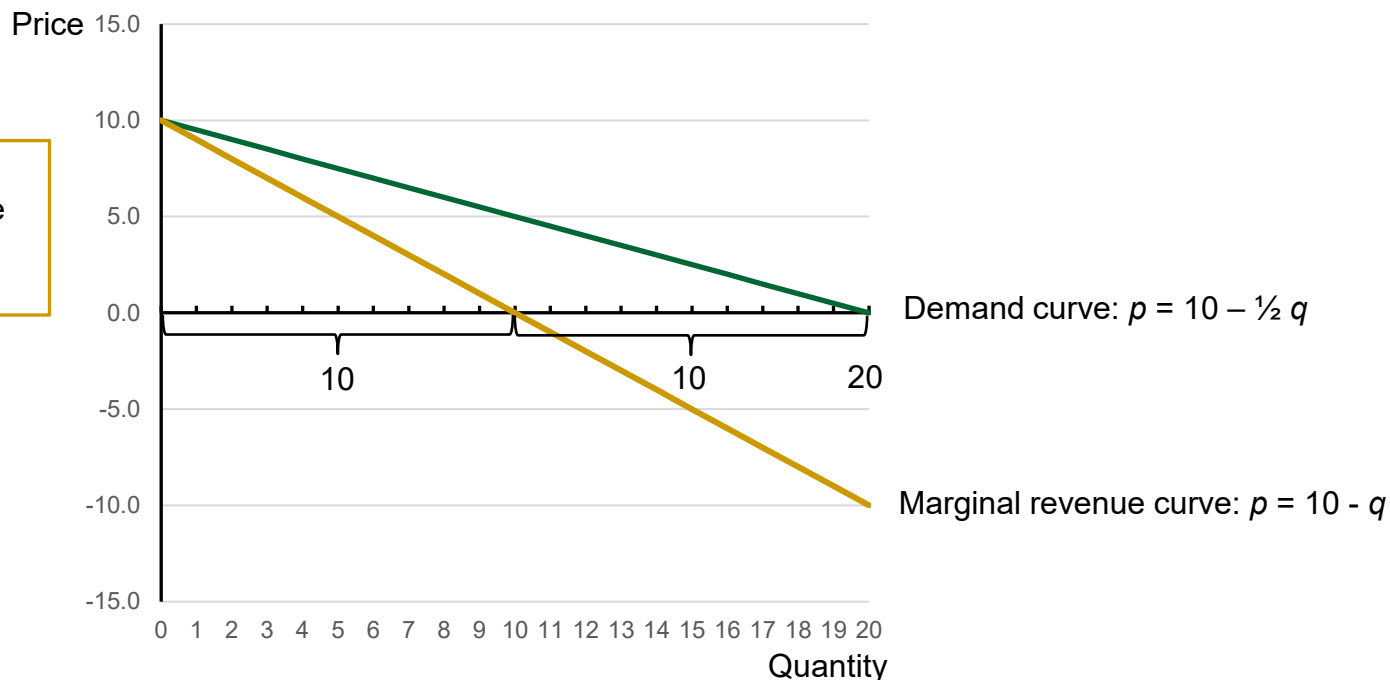
■ Marginal revenue/marginal cost diagrams

- Will build this step-by-step

a. Consider an (inverse) demand curve: $p = 10 - \frac{1}{2}q$

→ b. Add the marginal revenue curve: $p = 10 - q$

MR/MC Diagram



Note: With linear demand, the marginal revenue curve falls twice as fast as the inverse demand curve

Profit maximization

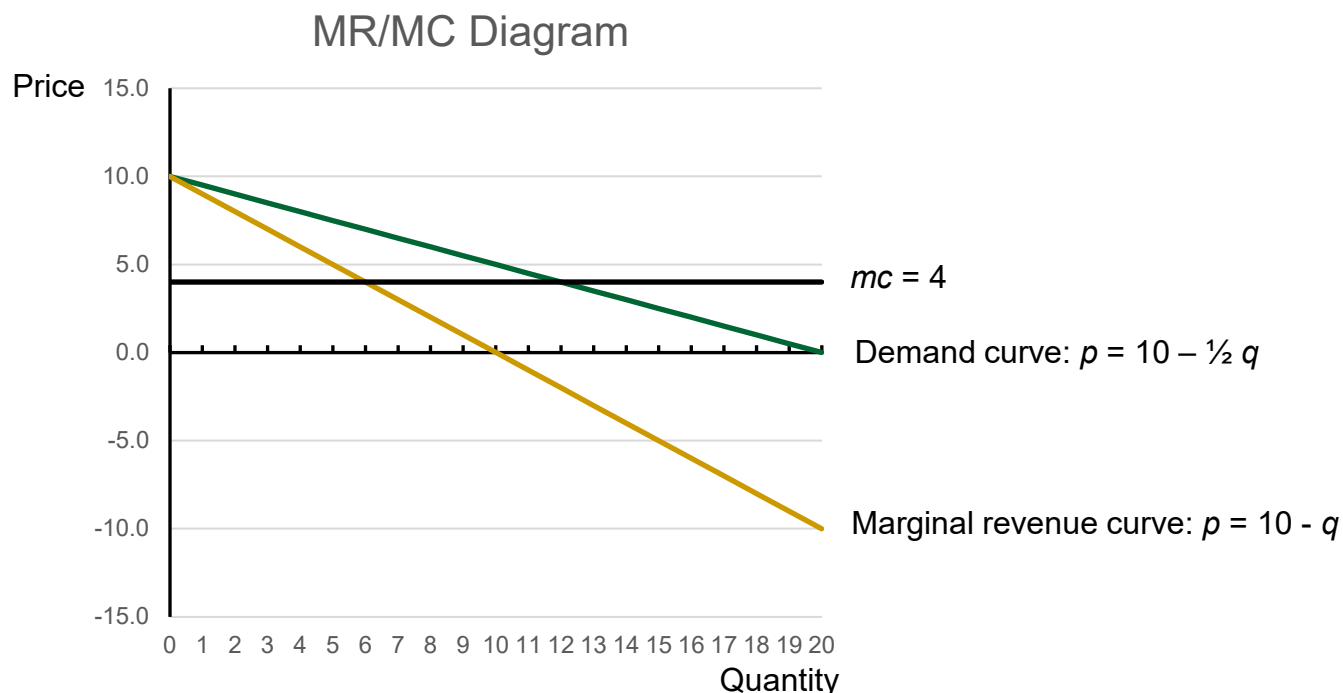
■ Marginal revenue/marginal cost diagrams

■ Will build this step-by-step

a. Consider an (inverse) demand curve: $p = 10 - \frac{1}{2} q$

b. Add the marginal revenue curve: $p = 10 - q$

→ c. Add the marginal cost curve: $c = 4$ (constant marginal cost)



Profit maximization

■ Marginal revenue/marginal cost diagrams

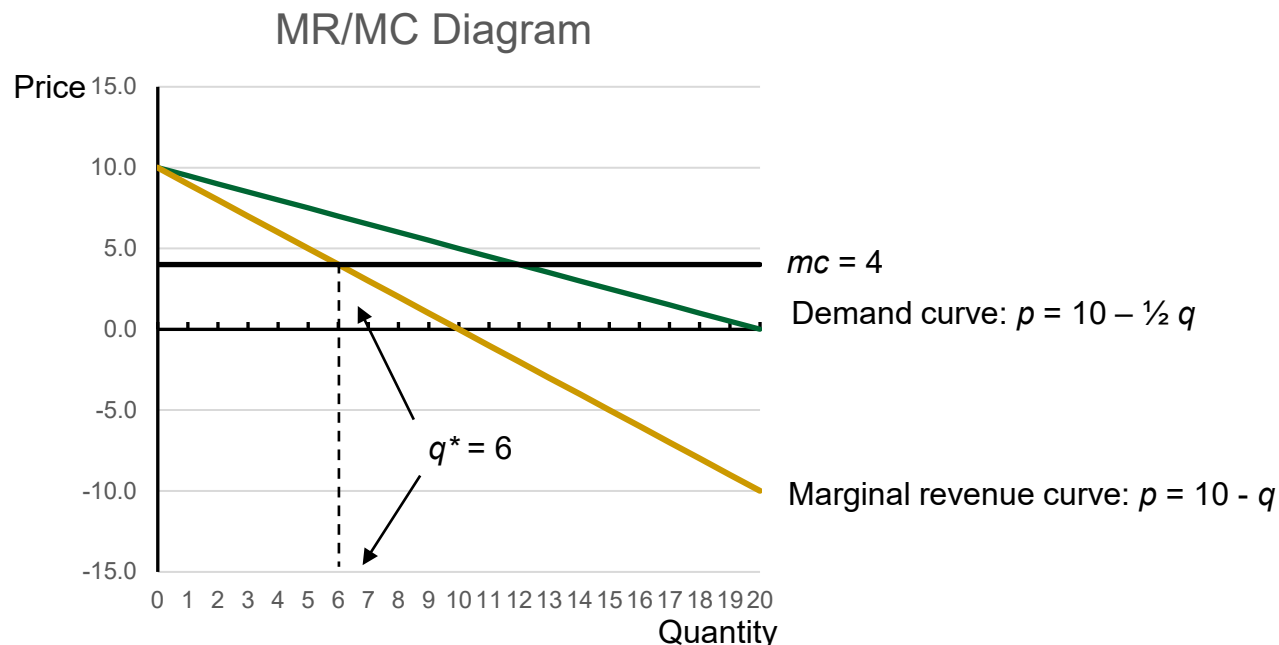
■ Will build this step-by-step

a. Consider an (inverse) demand curve: $p = 10 - \frac{1}{2}q$

b. Add the marginal revenue curve: $p = 10 - q$

c. Add the marginal cost curve: $c = 4$ (constant marginal cost)

→ d. Find intersection of mr and mc curves to determine profit-maximizing q^* ($= 6$)

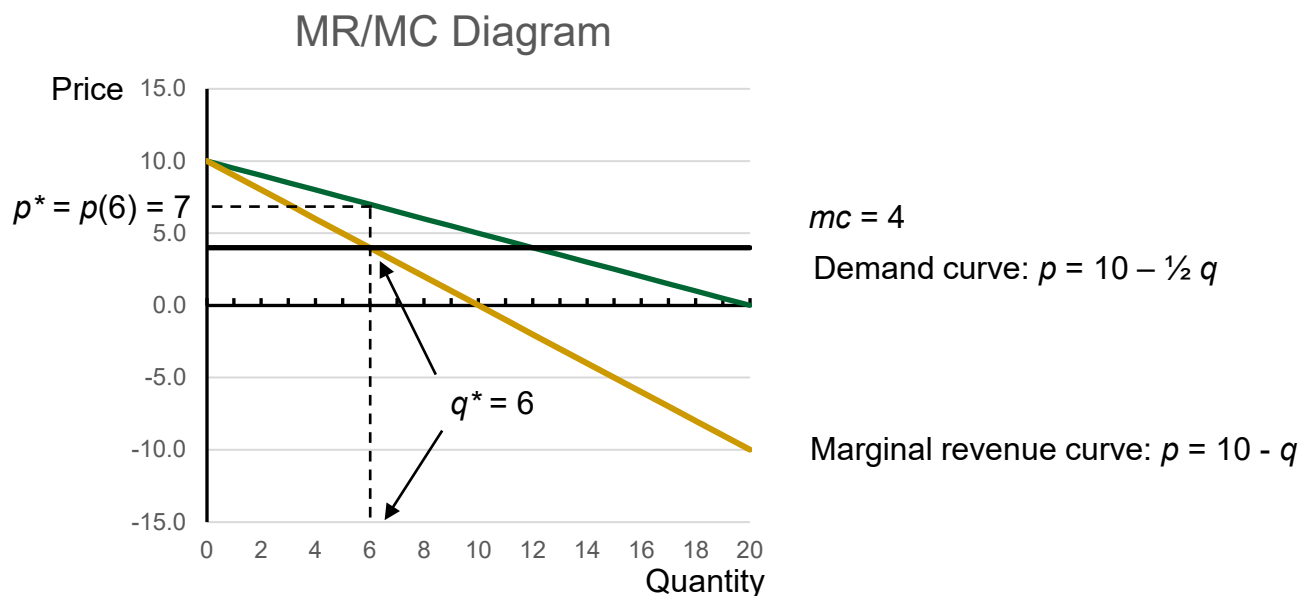


Profit maximization

■ Marginal revenue/marginal cost diagrams

■ Will build this step-by-step

- a. Consider an (inverse) demand curve: $p = 10 - \frac{1}{2} q$
- b. Add the marginal revenue curve: $p = 10 - q$
- c. Add the marginal cost curve: $c = 4$ (constant marginal cost)
- d. Find intersection of mr and mc curves to determine profit-maximizing q^* ($= 6$)
- e. Find $p^* = p(q^*)$ from the inverse demand curve ($p^* = 7$)

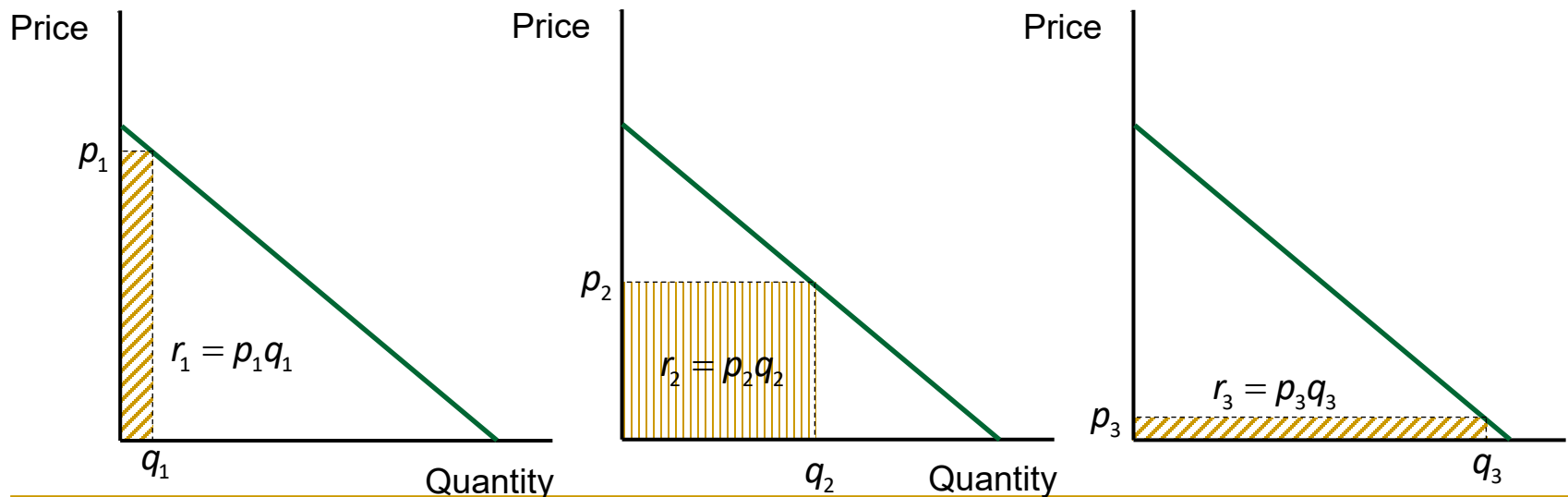


2. Incremental Revenue

Incremental revenue

■ Introduction

- *Incremental revenue* is the net gain in revenue that a firm could earn if it were to increase its product by some discrete amount Δq
- Incremental revenue is important when determining whether a firm should change its output level to increase its profits
- Incremental revenue can be positive or negative
 - Moving from q_1 to q_2 increases revenue (incremental revenue is positive)
 - Moving from q_2 to q_3 decreases revenue (incremental revenue is negative)



Incremental revenue

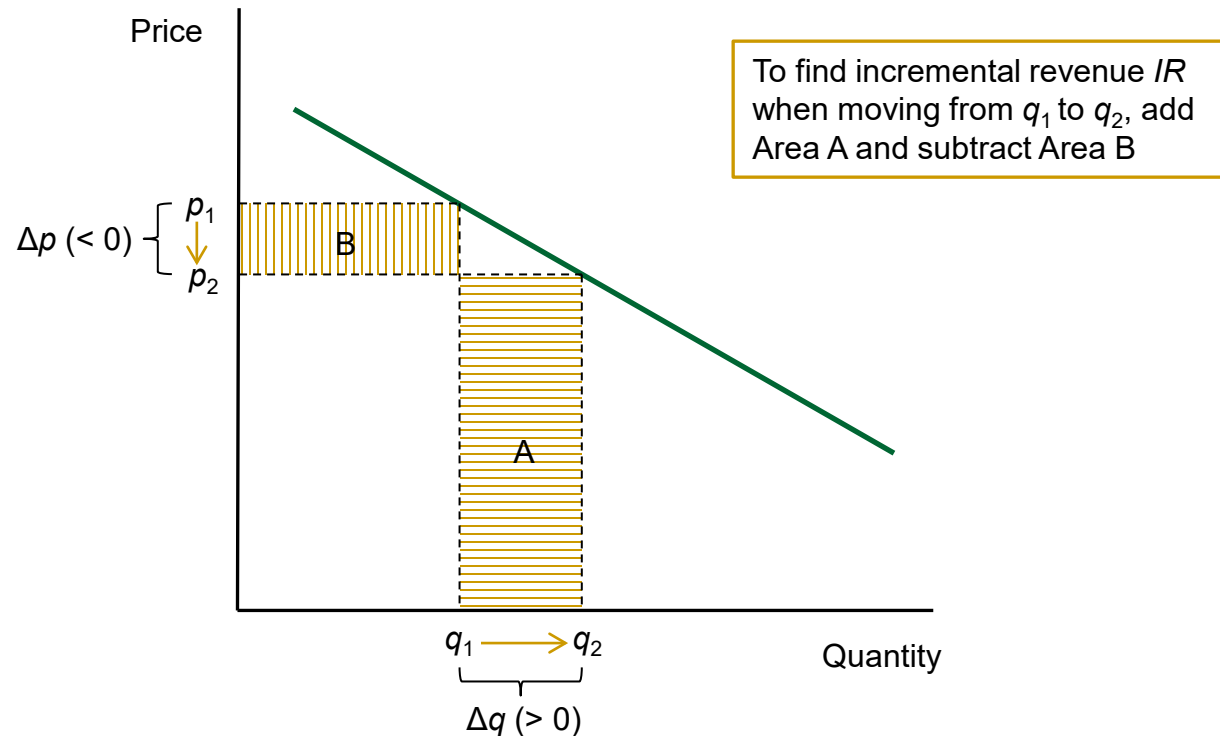
- Think about incremental revenue in two parts:
 1. The *gain* in revenue due to the sale of the additional units at the lower market-clearing price
 - Since there are more units to sell and demand is downward-sloping, the price will drop to clear the market
 - The gain in revenue on the additional sales is equal to $\Delta q(p - \Delta p)$, where—
 - Δq is the additional quantity to be sold
 - Δp is the market price decrease necessary to clear the market with the sale of the additional units
 2. Minus the *loss* of revenue on prior units sold due to the decrease in the market-clearing price
 - This loss of margin is the prior quantity q times the required price decrease, or $[q\Delta p]$
- So

$$IR = \Delta q(p - \Delta p) - q\Delta p$$

This is the formula for *marginal revenue* in the discrete case when $\Delta q = 1$

Incremental revenue

■ Graphically



Area A = $\Delta q(p_1 - \Delta p)$ is the *gain* in revenue from the additional sales Δq at the lower price $p_2 = p_1 - \Delta p$

Area B = $q_1 \Delta p_1$ is the *loss* in revenue due to the sales of q_1 at the lower price p_2

So

$$IR = \overbrace{\Delta q (p - \Delta p)}^{\text{Area A}} - \overbrace{q \Delta p}^{\text{Area B}}$$

Incremental revenue

■ Example

- (Inverse) demand: $p = 10 - \frac{1}{2}q$
- Starting point: $q_1 = 4$
- End point: $q_2 = 8$

You need to calculate these variables:

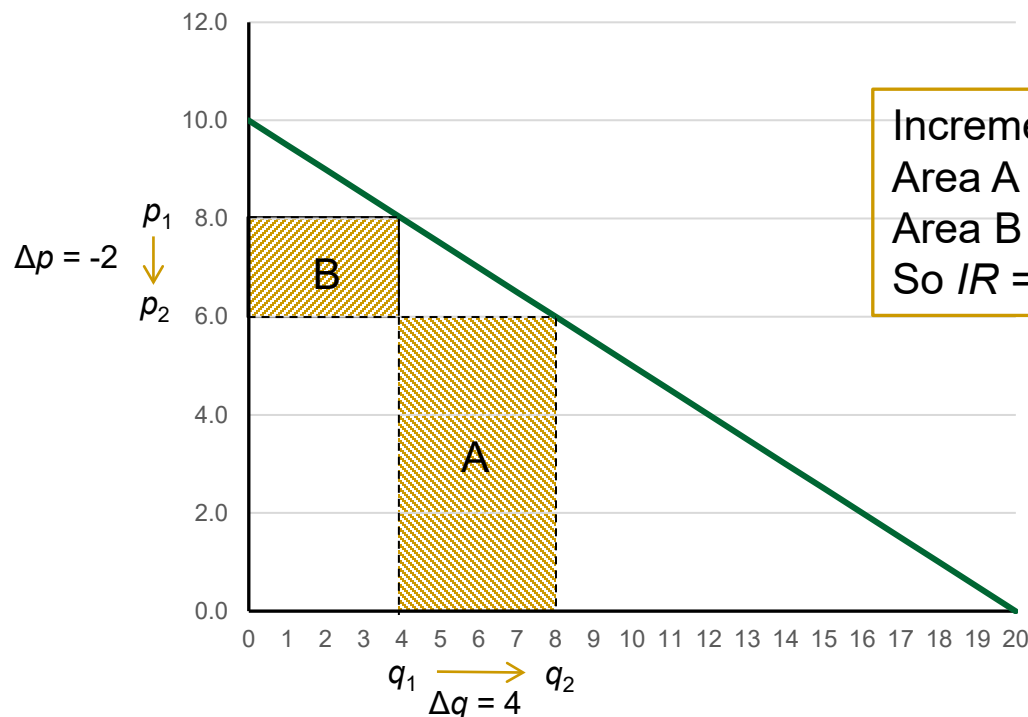
$$\text{So } p_1 = 8$$

$$\text{So } p_2 = 6$$

$$\Delta q = q_2 - q_1 = 8 - 4 = 4$$

$$\Delta p = p_2 - p_1 = 6 - 8 = -2$$

Incremental Revenue Analysis



Incremental revenue = Area A – Area B
Area A = $p_2 \Delta q = (6)(4) = 24$
Area B = $q_1 \Delta p = (4)(-2) = -8$
So $IR = 32 - 8 = 16$

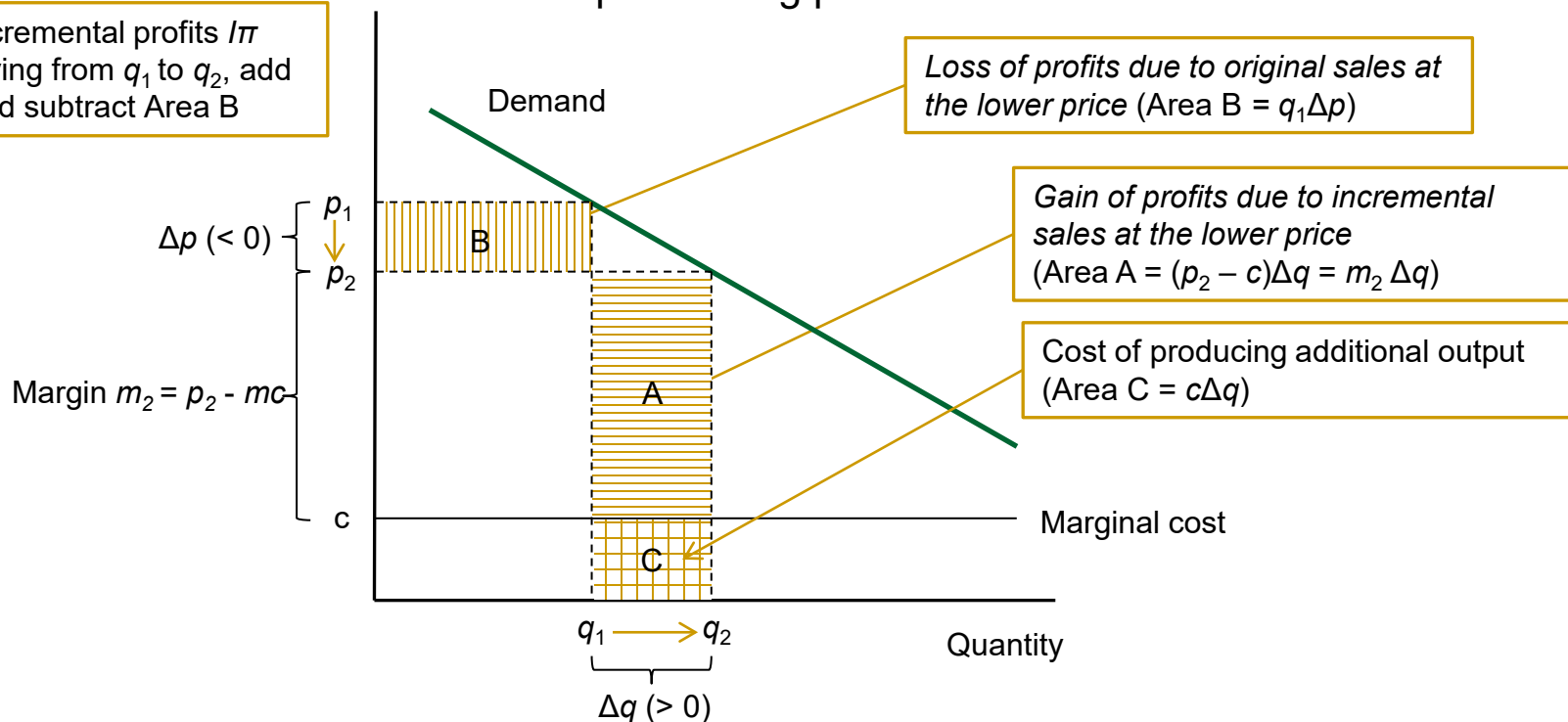
That is, the firm makes \$16 more in revenues by moving from q_1 to q_2

Incremental profit

- We can easily extend the analysis of incremental revenues to incremental profits—We just have to:
 - Add the costs of additional production if we are adding to output ($\Delta q > 0$), or
 - Subtract the costs if we are reducing output ($\Delta q < 0$)

Example: Adding production

To find incremental profits $\Delta\pi$ when moving from q_1 to q_2 , add Area A and subtract Area B



Incremental profit

■ Example: Output increase

- (Inverse) demand: $p = 10 - \frac{1}{2}q$
- Starting point: $q_1 = 2$
- End point: $q_2 = 6$
- Constant marginal cost $c = 4$

You need to calculate these variables:

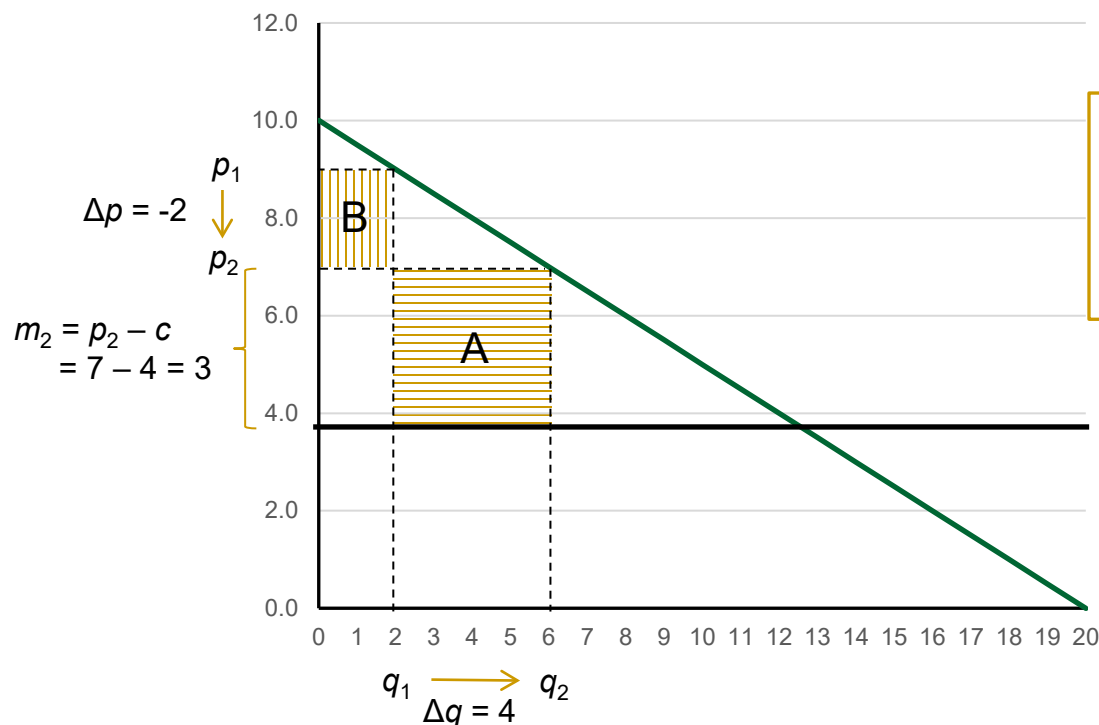
$$\text{So } p_1 = 9$$

$$\text{So } p_2 = 7$$

$$\Delta q = q_2 - q_1 = 6 - 2 = 4$$

$$\Delta p = p_2 - p_1 = 7 - 9 = -2$$

$$\begin{aligned} \text{Margin } m_2 &= p_2 - c \\ &= 7 - 4 = 3 \end{aligned}$$



Incremental profits = Area A – Area B

$$\text{Area A} = m_2 \Delta q = (3)(4) = 12$$

$$\text{Area B} = q_1 \Delta p = (2)(-2) = 4$$

$$\text{So } \Delta \pi = 12 - 4 = 8$$

That is, the firm makes \$8 more in profits by moving from q_1 to q_2

Incremental profit

■ Example: Price increase (decreasing production)

- (Inverse) demand: $p = 10 - \frac{1}{2}q$
- Starting point: $p_1 = 5$
- End point: $p_2 = 5.25$
- Constant marginal cost $c = 4$

You need to calculate these variables:

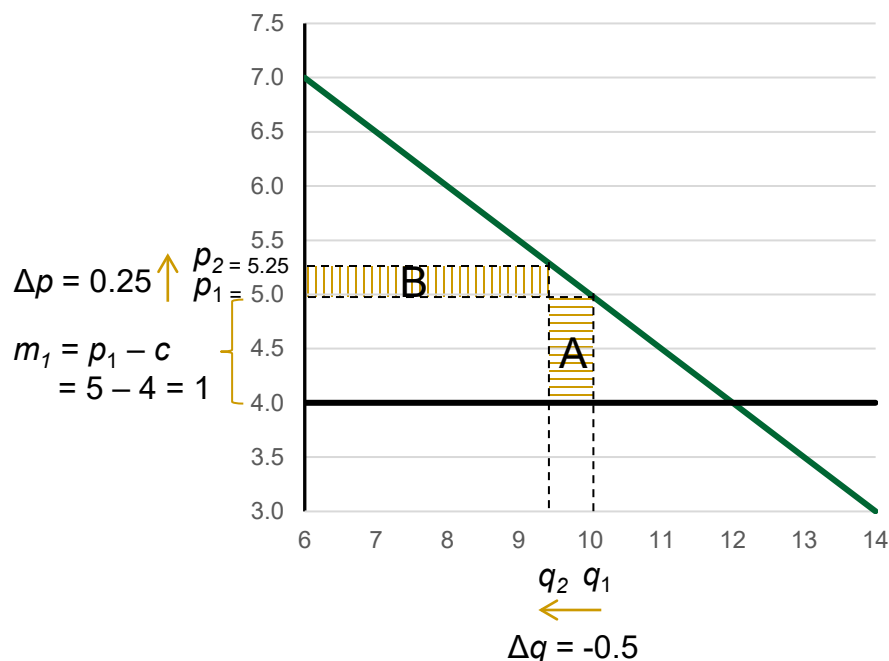
$$\text{So } q = 20 - 2p$$

$$\text{So } q_1 = 10$$

$$\text{So } q_2 = 9.5$$

$$\Delta q = q_2 - q_1 = 9.5 - 10 = -0.5$$

$$\Delta p = p_2 - p_1 = 5.25 - 5 = 0.25$$



With an increase price and a concomitant *reduction* in output, the roles of Areas A and B are *reversed*:

Area A now represents the *loss* of profits from lost sales that would have been made at original price p_1 ($= m_1 \Delta q$)

Area B represents the *gain* of profits from the increased price charged on the sales that continue to be made ($= q_2 \Delta p$)

Incremental profits = Area B – Area A

$$\text{Area B} = q_2 \Delta p = (9.5)(0.25) = 2.375$$

$$\text{Area A} = m_1 \Delta q = (1)(-0.5) = -0.5$$

$$\text{So incremental profits} = 2.375 - 0.5 = 1.875$$

Incremental profit

■ Observations

- The prior example shows that under the conditions of the hypothetical, a 5 percent price increase would be profitable to the firm

This is mathematically identical to the exercise required by the *hypothetical monopolist test*, which is the primary analytical tool used by the agencies and the courts to define relevant markets. The hypothetical monopolist test asks whether a hypothetical monopolist of the candidate market could profitably sustain a “small but significant and nontransitory increase in price” (SSNIP), usually taken to be 5 percent. If so, the candidate market is a relevant market. In the prior example, if we assume that the demand curve is for the candidate market as a whole, this will be the residual demand curve for the hypothetical monopolist. If the original market price was \$5 (as in the hypothetical), the hypothetical monopolist would find it profitable to reduce output in order to raise price by a 5 percent SSNIP.

We will confront the hypothetical monopolist test in almost every case study going forward, starting with the H&R Block/TaxAct case study next week. You will have plenty of opportunities to become familiar with the mechanics of the hypothetical monopolist test.

Appendix 1: Inverting Demand and Inverse Demand Functions

Inverting demand and inverse demand functions

■ Motivation

- You will be given either the demand function or the inverse demand function in a problem. But you may need to derive the other function in order to solve the problem.

□ Example

- In the price increase problem on Slide 41, you were given the inverse demand function:

$$p = 10 - \frac{1}{2}q$$

- But the problem gave you p_1 and p_2 and required you to calculate q_1 and q_2 . To do this, you need to convert the inverse demand function into the demand function, so that you could use the prices to calculate the associated quantities
- To create the demand function, you need to algebraically manipulate the inverse demand equation to isolate q on the left-hand side, so that quantities (which you need) are expressed in terms of prices (which the problem gives you)

Inverting demand and inverse demand functions

■ Mechanics

- An equality is maintained if you perform the same operation to both sides of the equation
- Here are the steps to convert the above inverse demand function to a demand function:

Add $\frac{1}{2} q$ to both sides:

$$p + \frac{1}{2}q = 10 - \frac{1}{2}q + \frac{1}{2}q$$
$$= 10$$

Subtract p from both sides:

$$p + \frac{1}{2}q - p = 10 - p$$

Simply:

$$\frac{1}{2}q = 10 - p$$

Multiply both sides by 2:

$$(2)\left(\frac{1}{2}q\right) = (2)(10 - p)$$

Simply:

$$q = 20 - 2p$$


This is the demand curve that you would need for the price increase incremental revenue problem

- The same technique can be used to convert a demand curve into an inverse demand curve

Inverting demand and inverse demand functions

- Or use an algebraic calculator:

We want q on the right-hand side, so solve for q

 **MathPapa** ALGEBRA CALCULATOR PRACTICE LESS

Algebra Calculator

What do you want to calculate?

$$p = 10 - \left(\frac{1}{2}q\right)$$

CALCULATE IT!

Solve for Variable

Solve for:

Let's solve for q .

$$p = 10 - \frac{1}{2}q$$

Step 1: Flip the equation.

$$\frac{-1}{2}q + 10 = p$$

Step 2: Add -10 to both sides.

$$\frac{-1}{2}q + 10 + -10 = p + -10$$
$$\frac{-1}{2}q = p - 10$$

Step 3: Divide both sides by $(-1)/2$.

$$\frac{\frac{-1}{2}q}{\frac{-1}{2}} = \frac{p-10}{\frac{-1}{2}}$$
$$q = -2p + 20$$

Answer:

$$q = -2p + 20$$

which is the same as the $20 - 2p$ we derived on the previous slide

Unit 7. Competition Economics

Part 2. Markets and Market Equilibria

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

Topics

- Substitutes, complements, and elasticities
- Markets and market equilibria
 - Perfectly competitive markets
 - Perfectly monopolized markets
 - Imperfectly competitive markets
 - Cournot oligopoly models
 - Bertrand oligopoly models
 - Dominant firm with a competitive fringe

Substitutes, Complements, and Elasticities

Substitutes/Complements

■ Substitutes

- *Definition*: Two products or services are *substitutes* if, when consumer demand increases for one product, it will decrease for the other product

- Symbolically:

$$\frac{\Delta q_2}{\Delta q_1} < 0$$

Because Δq_1 and Δq_2 move in opposite directions, they will have different signs (i.e., one will be positive and the other will be negative)

- Examples

- Coke and Pepsi
- iPhone and Galaxy S series mobile phones
- Nike and Adidas shoes
- Hertz and Avis rental cars
- *Horizontal mergers* involve combinations of firms that offer substitute products

Substitutes/Complements

■ Substitutes

□ Substitutes and prices

- If products 1 and 2 are substitutes, then as the price of 1 increases, the demand for 2 increases:

$$\frac{(-)}{\Delta q_1} \frac{(-)}{\Delta q_1} = \frac{(+)}{\Delta p_1} > 0$$

A negative number times a negative number is a positive number

Slope of the demand curve for product 1
(< 0 since downward sloping)

Substitutes/Complements

■ Complements

- *Definition*: Two products are *complements* if, when consumer demand increases for one product, consumer demand also will increase for the other product
- Symbolically:

$$\frac{\Delta q_2}{\Delta q_1} > 0$$

□ Examples

- *Vertical mergers* involve complements
 - Television LCD screens and TV sets
 - Car engines and cars
 - Cable TV programming and cable TV distribution (AT&T/Time Warner)
 - Drug manufacture and drug distribution
- But some conglomerate mergers can also involve complements
 - Printers and ink cartridges
 - Razors and razor blades
 - Computers and computer software

Substitutes/Complements

■ Complements

□ Complements and prices

- If products 1 and 2 are complements, then as the price of 1 increases, the demand for 2 decreases

$$\frac{(+)}{\Delta q_1} \frac{(-)}{\Delta q_1} = \frac{(-)}{\Delta p_1} < 0$$

A positive number times a negative number is a negative number

Slope of the demand curve for product 1
(< 0 since downward sloping)

Elasticities

■ Own-elasticity of demand

- *Definition:* The percentage change in the quantity demanded divided by the percentage change in the price of that *same* product

The Greek letter epsilon (ϵ) is the usual symbol in economics for elasticity

$$\epsilon \equiv \frac{\% \Delta q_i}{\% \Delta p_i}$$

Percentage change q_i in the quantity of product i demanded
Percentage change p_i in the price of product i

- This is sometimes called *elasticity of demand* or *price elasticity of demand*
- Own-elasticities are always *negative in sign* since changes in prices and quantities move in opposite directions along a downward-sloping demand curve
- Examples:
 - If price increases by 5% and demand decreases by 10%, then the own-elasticity is -2 (= -10%/5%)
 - If price increases by 3% and demand decreases by 1%, then the own-elasticity is -1/3 (= -1%/3%)

Technically, these are *arc elasticities* because they give percentage changes for discrete changes in prices and quantities

Elasticities

- Own-elasticity of demand

- Relationship to the slope of the demand curve:

$$\varepsilon \equiv \frac{\% \Delta q}{\% \Delta p} \equiv \frac{\frac{\Delta q}{q}}{\frac{\Delta p}{p}} = \frac{\Delta q_i}{\Delta p_i} \frac{p_i}{q_i},$$

Slope of the demand curve

that is, the own-elasticity at a point on the demand curve is equal to the slope of the demand curve at that point times the ratio of price to quantity at that point

- *Mathematical note (optional)*

- *In calculus terms:*

$$\varepsilon \equiv \frac{dq_i}{dp_i} \frac{p_i}{q_i}$$

This deals with the continuous case

Elasticities

For intuition only
(NOT technically correct,
but it is usually the
intuition that is important)

■ Some important definitions

- *Inelastic demand*: Not very price sensitive

$$|\varepsilon| = \left| \frac{\% \text{change in quantity}}{\% \text{change in price}} \right| < 1$$

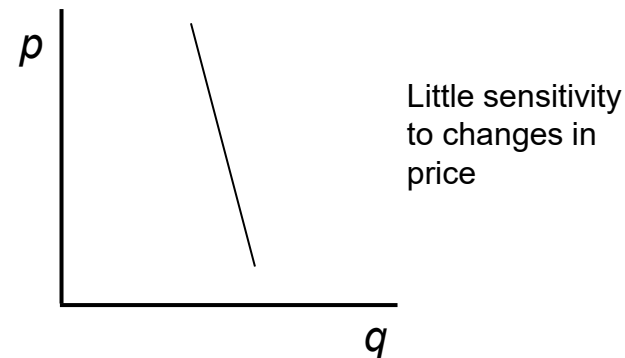
- *Unit elasticity*:

$$|\varepsilon| = \left| \frac{\% \text{change in quantity}}{\% \text{change in price}} \right| = 1$$

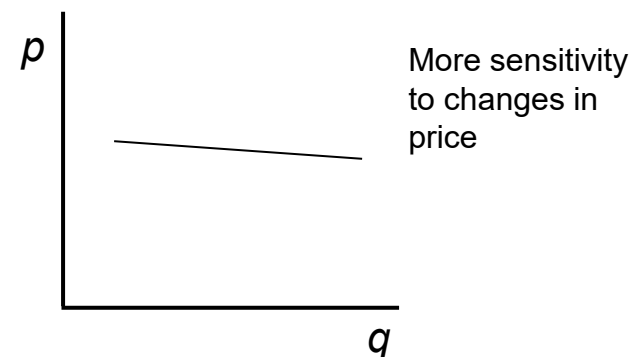
- *Elastic demand*: Price sensitive

$$|\varepsilon| = \left| \frac{\% \text{change in quantity}}{\% \text{change in price}} \right| > 1$$

Inelastic demand



Elastic demand



Note: $|x|$ is the *absolute value* of x , which is the magnitude of x without the sign. So $|3| = |-3| = 3$.

Elasticities

$$\text{Remember } \varepsilon = \frac{\Delta q_i}{\Delta p_i} \frac{p_i}{q_i}$$

- Elasticity of demand and the slope of the demand curve
 - Even when the demand curve is linear (so that the slope is constant), elasticity varies along the demand curve because the ratio of p_i to q_i changes along the curve

Inverse demand curve:

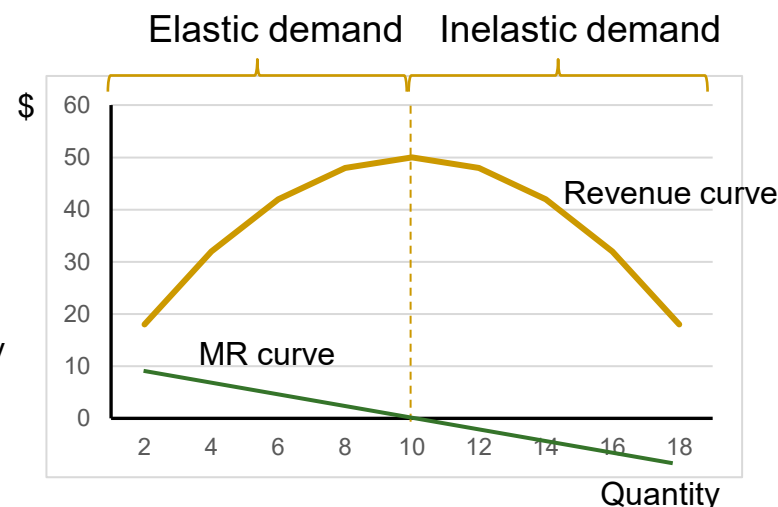
$$p = 20 - 2q$$

p	q	Slope	p/q	ε	Total revenue
1	18	-2	0.0556	-0.1111	18
2	16	-2	0.1250	-0.2500	32
3	14	-2	0.2143	-0.4286	42
4	12	-2	0.3333	-0.6667	48
5	10	-2	0.5000	-1.0000	50
6	8	-2	0.7500	-1.5000	48
7	6	-2	1.1667	-2.3333	42
8	4	-2	2.0000	-4.0000	32
9	2	-2	4.5000	-9.0000	18

Inelastic demand
 $|\varepsilon| < 1$

Unit elasticity
 $|\varepsilon| = 1$

Elastic demand
 $|\varepsilon| > 1$



Increasing elasticity

General rules:

Elasticity decreases as quantity increase and prices decrease
Elasticity increases as quantity decrease and prices increase

Elasticities

- Predicting quantity changes for a given price increase

- An approximation

- We can approximate a percentage quantity change $\% \Delta q$ for a given percentage price change $\% \Delta p$ by multiplying the own-elasticity ε by the percentage price change:

$$\varepsilon = \frac{\% \Delta q}{\% \Delta p} \Rightarrow \% \Delta q \approx \varepsilon \% \Delta p$$

- The relationship is not exact since the elasticity can change over the discrete range of the price change (as it does on a linear demand function)

- For linear demand curves, an exact relationship exists for a price change Δp :

$$\varepsilon = \frac{\frac{\Delta q}{q}}{\frac{\Delta p}{p}} = \frac{\Delta q}{\Delta p} \frac{p}{q} \Rightarrow \Delta q = \varepsilon \frac{q}{p} \Delta p$$

- Or, if you know the slope b of the demand curve

$$b = \frac{\Delta q}{\Delta p} \Rightarrow \Delta q = b \Delta p$$

These relationships can be important when determining a quantity change associated with a price increase in the hypothetical monopolist test for market definition

Cross-elasticities

■ Cross-elasticity of demand

- *Definition:* The percentage change in the quantity demanded for product j divided by the percentage change in the price of product i .

$$\varepsilon_{ij} \equiv \frac{\% \Delta q_i}{\% \Delta p_j}$$

Percentage change q_i in the quantity of product i demanded
Percentage change p_j in the price of product j

- With a little algebra (as before):

$$\varepsilon_{ij} = \frac{\Delta q_i}{\Delta p_j} \frac{p_j}{q_i}$$

Positive for substitutes
Negative for complements

- Mathematical note (optional)

- In calculus terms:

$$\varepsilon_{ij} \equiv \frac{dq_i}{dp_j} \frac{p_j}{q_i}$$

Cross-elasticities

■ Cross-elasticities—More definitions

□ *High cross-elasticity of demand:*

- A small change in the price of product *i* will cause a large change of demand to product *j*
- As a result, product *j* brings a lot of competitive pressure on product *i*

Make sure you understand why!

■ *Think of it this way:*

- In a two-firm market, a high cross-elasticity implies a large number of *marginal customers* who will abandon product *i* when its price increases and will divert to product *j*
- It also means a correspondingly smaller number of *inframarginal customers* who will stay with product *i* in the wake of a price increase

□ *Low cross-elasticity of demand:*

- A large change in the price of product *i* will cause only a small change of demand to product *j*
- As a result, product *j* brings little competitive pressure on product *i*

Make sure you understand why!

This is why antitrust lawyers talk so much about cross-elasticities!

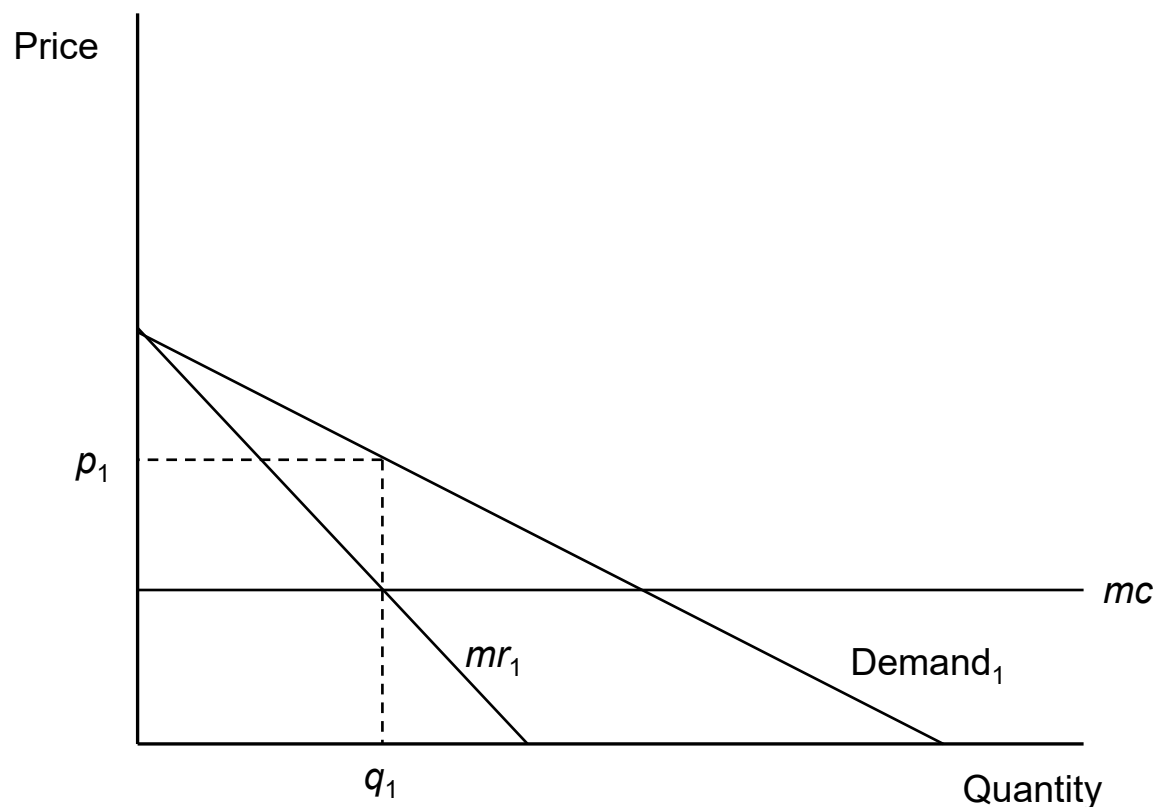
An important relationship

- Relationship of own-elasticities to cross-elasticities
 - Intuitively, the higher the cross-elasticities with the other products, the more elastic is the own-elasticity
 - Consequently, if a merger has the effect of decreasing the cross-elasticities of one or more substitute products, then its own-elasticity also decreases
 - *Key result:* All other things being equal, decreasing the cross-elasticity of demand of substitute products shifts the intersection of the marginal revenue curve and the marginal cost curve to the left, leading the firm to decrease output and increase prices

Let's look at a graph to see why

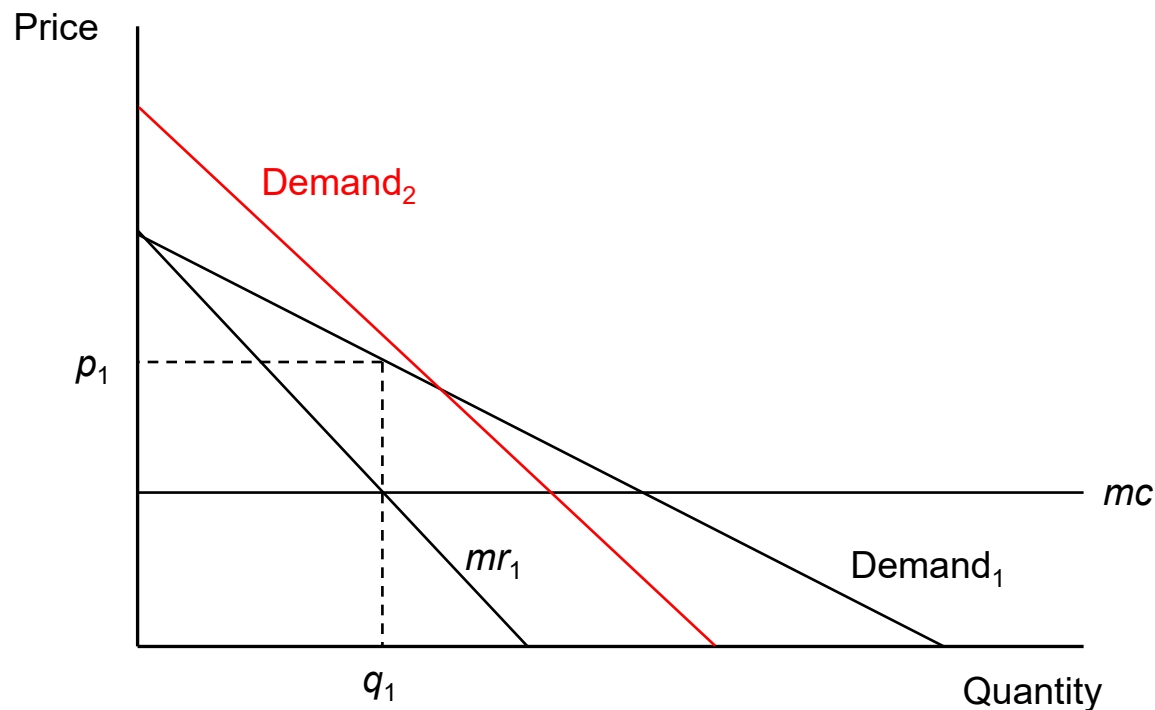
An important relationship

- Relationship of own-elasticities to cross-elasticities
 - Premerger profit-maximizing price-quantity equilibrium for the acquiring firm



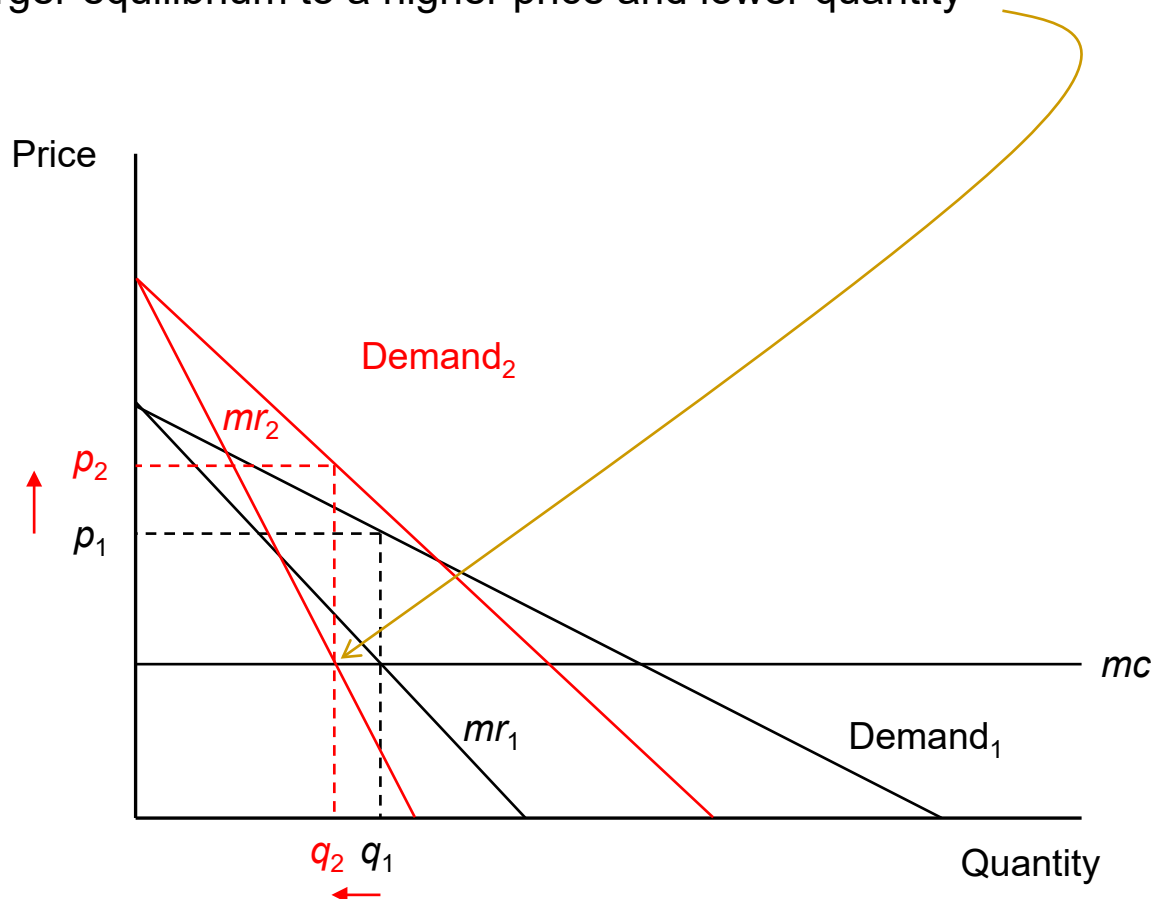
An important relationship

- Relationship of own-elasticities to cross-elasticities
 - Postmerger, the acquiring firm increases the acquired firm's price, making the acquired firm's substitute product less attractive and so decreasing the cross-elasticity of demand with the acquiring firm's product
 - The acquiring firm's residual demand curve then becomes more inelastic (steeper) around the premerger equilibrium point



An important relationship

- Relationship of own-elasticities to cross-elasticities
 - Postmerger, the marginal revenue curve also becomes steeper, moving the postmerger equilibrium to a higher price and lower quantity



An important relationship

- Relationship of own-elasticities to cross-elasticities—
Equivalent statements:

- Reducing the attractiveness of substitutes
- Reducing the cross-elasticities of demand of substitute products
- Making the demand curve more inelastic
- Making the demand curve steeper

} Around the premerger
price-quantity equilibrium

All result in higher prices and lower quantities

An important relationship

- Relationship of own-elasticities to cross-elasticities

- Technically:

$$|\varepsilon_{11}| = 1 + \frac{1}{s_1} \sum_{i=2}^n \varepsilon_{i1} s_i$$

$\varepsilon_{i1} > 0$ if the other products are substitutes for product 1

where ε_{11} is the own-elasticity of product 1 and ε_{i1} is the cross-elasticity of substitute product i with respect to the price of product 1 (evaluated at current prices and quantities)

- Two important takeaways

1. As the cross-elasticities on the right-hand side decrease, the demand for product 1 becomes more inelastic ($|\varepsilon|$ becomes smaller)
 - This allows Firm 1 to exercise market power and charge higher prices
2. Competitors with larger market shares have more influence in constraining the price of Firm 1 for any given cross-elasticity (i.e., the cross-elasticities in the formula are weighted by market share)

You do not have to know the formula but you should know the takeaways

Diversion ratios

- **Definition:** Diversion ratio (D)

$$D_{12} \equiv \frac{\text{Units captured by Firm 2 as a result of Firm 1's price increase}}{\text{Total units lost by Firm 1 as a result of Firm 1's price increase}} \equiv \left| \frac{\Delta q_2}{\Delta q_1} \right|$$

- NB: By convention, diversion ratios are *positive*. Since $\Delta q_1/\Delta p_1$ is negative (the demand curve is downward sloping), we need to look at the absolute value of the fraction

- **Example**

- Firm 1 increases its price by 5% and loses a total of 20 units to substitute products
- When Firm 1 increases its price, Firm 2—which maintains its original price—gains 5 units of additional sales
- So:

$$D_{12} = \left| \frac{\Delta q_2}{\Delta q_1} \right| = \left| \frac{5}{-20} \right| = \frac{5}{20} = 0.25 = 25\%$$

Diversion ratios

- Thinking about diversion ratios

- Think of D_{12} as $D_{1 \rightarrow 2}$, that is—

1. the number of units lost by Firm 1 that are “diverted” to Firm 2 (which produces a substitute product)
2. as a result of Firm 1’s price increase
3. when Firm 2’s price stays constant

This heuristic assumes that there is a one-to-one substitution between Firm 1’s and Firm 2’s products

Diversion ratios

- Relation to cross-elasticities
 - Diversion ratios are closely related to cross-elasticities: both measure the degree of substitutability between two products when the relative prices change
 - Elasticities measure substitutability in terms of the *percentage* increase in Firm 2's unit sales for a *percentage* increase in Firm 1's price
 - Diversion ratios measure substitutability in terms the increase in Firm 2's unit sales as a percentage of all units lost by Firm 1 as a result of a given increase in Firm 1's price
 - Modern antitrust economics still speaks in terms of cross-elasticities when it often means diversion ratios
 - For example, products with high diversion ratios are said to have high cross-elasticities

We will see diversion ratios again in implementations of the hypothetical monopolist test and in the unilateral effects theory of anticompetitive harm

Markets and Market Equilibria: Perfectly Competitive Markets

Perfectly competitive markets

- *Definition:* A market in which no single firm can affect price, meaning—

1. The firm perceives its residual demand curve as horizontal
2. The firm perceives that it can sell any amount of product without affecting the market price

3. $\frac{dp}{dq_i} = 0$ (as perceived by the firm)

4. $p = \frac{dc}{dq_i}$ (i.e., price = marginal cost)

These four bullets are just different ways of saying the same thing

- Some more definitions

- “*Price taking*”: Competitive firms are called *price-takers*, that is, they take market price as given and not something that they can affect
- *Perfectly competitive equilibrium*: A market equilibrium exists where—
 1. Aggregate supply equals aggregate demand, *and*
 2. Each firm chooses its level of production so that the market-clearing price is equal to the firm’s marginal cost of production

Perfectly competitive markets

- What could cause a market to be perfectly competitive?
 - *Traditional theory*: Each individual firm's production is very small compared to aggregate demand at any price, so that individual production changes cannot move materially along the aggregate demand curve
 - This implies that there are a very large number of firms in the market
 - *Modern theory*: Competitors in the marketplace react strategically but non-collusively to price or quantity changes by a firm in ways that maintain the perfectly competitive equilibrium

Competitive firms

■ Three take-aways

1. Competitive firms do not perceive that their output decisions affect the market-clearing price
 - That is, each firm perceives that it faces a horizontal residual demand curve
 - In fact, their individual output decisions do affect the market-clearing price but because the effect is so small no individual firm perceives this
 - In the aggregate, the sum of the output of all competitive firms determines the market-clearing price
2. Competitive firms chose their output so that $p = mc$
 - Competitive firms, like all other firms, choose output so that marginal revenue is equal to marginal cost ($mr = mc$)
 - Since a competitive firm does not perceive that its output decisions affect the market-clearing price, the firm does not perceive that there is any downward adjustment in market price when it expands its output
 - Therefore, the firm perceives—and makes its output decision—on the premise that its marginal revenue is equal to the market price
 - Hence, the firm selects an output level so that $p = mc$
 - Mathematically:

$$mr(q_i) = p + q_i \frac{\Delta p}{\Delta q_i} = mc(q_i)$$

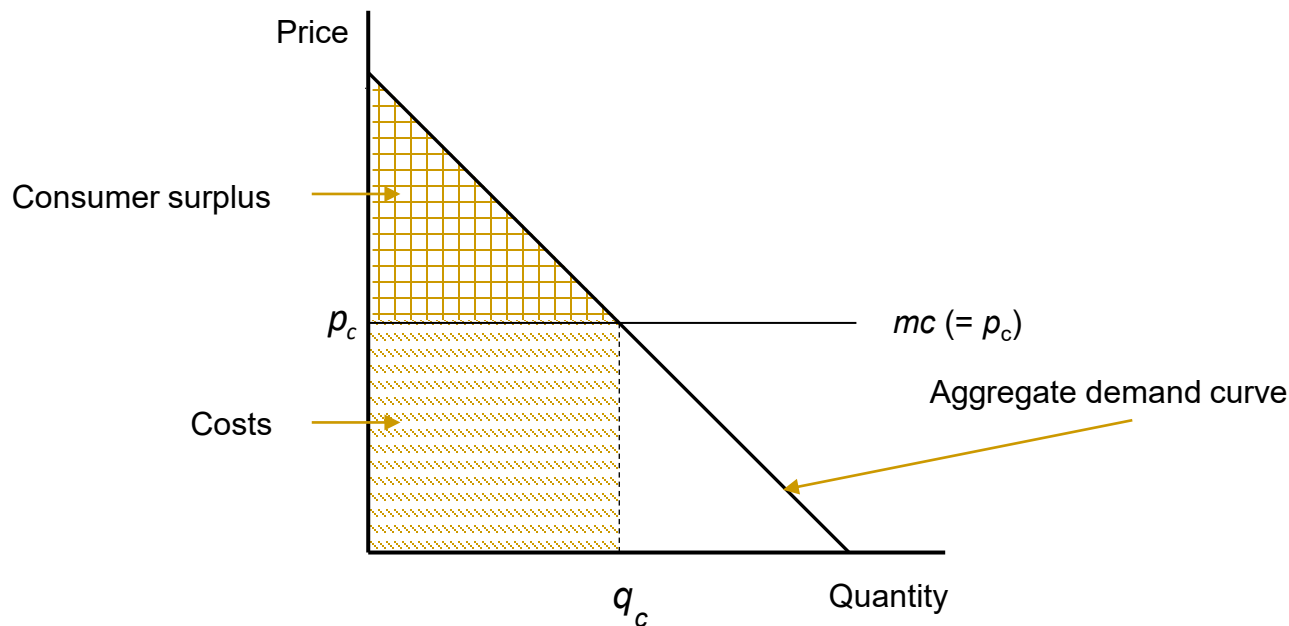
Perceived to be zero since the firm is a price-taker and does not believe that its choice of output affects market price

So:

$$p = mc$$

Competitive firms

- Three take-aways
 - 3. A competitive market maximizes consumer surplus¹
 - A competitive market exhausts all gains from trade



¹ We are assuming a simple market where there is only one product that sells at a single uniform price (i.e., there is no price discrimination).

Perfectly Monopolized Markets

Perfect monopoly

■ Basic concepts

- In a perfect monopoly market, there is only one firm that supplies the product
 - This is an economic concept
 - In law, a monopolist need not control 100% of the market
- Although there is only one firm in the market, it still faces a downward-sloping demand curve
 - There can be some substitutes for the monopolist's product—just not very good ones
- The aggregate demand curve defines the residual demand curve facing an (economic) monopolist

In economics and in law, a firm that faces a downward-sloping residual demand curve and therefore has some power to influence the market-clearing price for its product is said to have *market power*. In antitrust law, a firm that has very significant power over the market-clearing price is said to have *monopoly power*. In economics, a monopolist is the only firm in the market.

Perfect monopoly

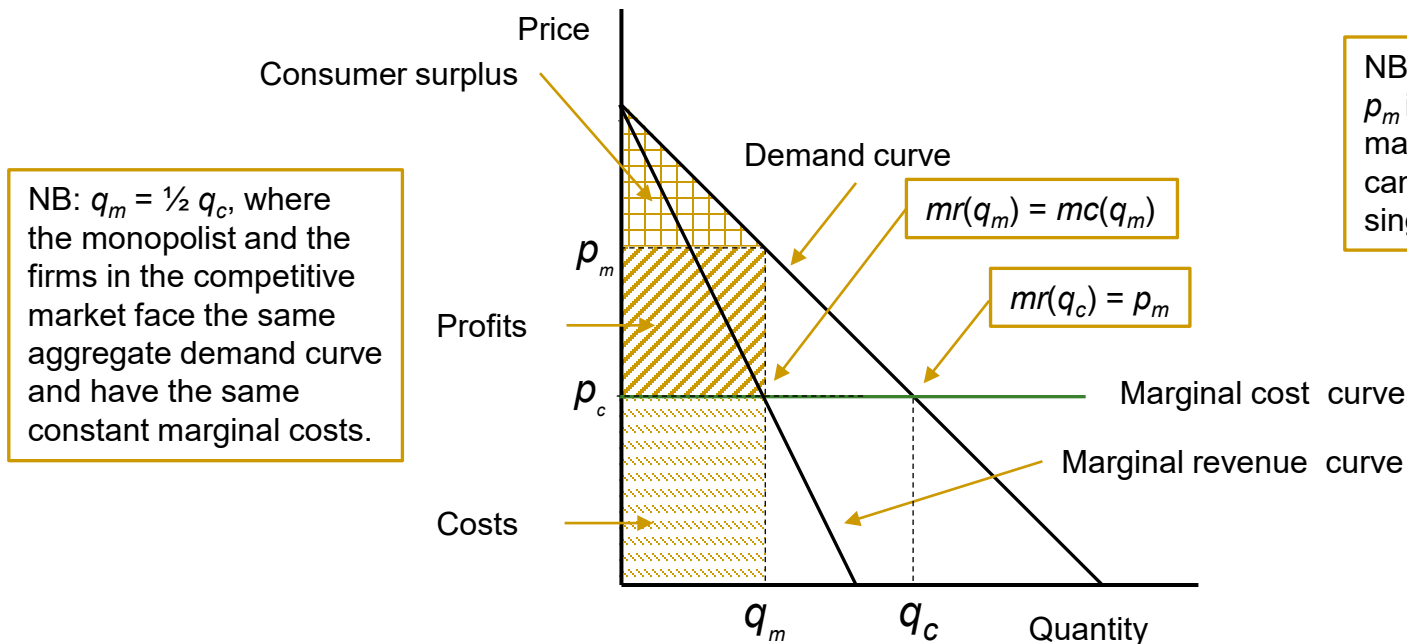
- A monopolist chooses output q_m so that $mr(q_m) = mc(q_m)$

1. A monopolist charges a higher price than a competitive firm

$$p_m > mr(q_m) = mc(q_m) = mc(q_c) = p_c$$

where marginal costs are constant¹

2. A monopolist produces a lower output than would a competitive firm facing the same residual demand curve ($q_m < q_c$)



¹ But true whenever marginal costs are constant or increasing.

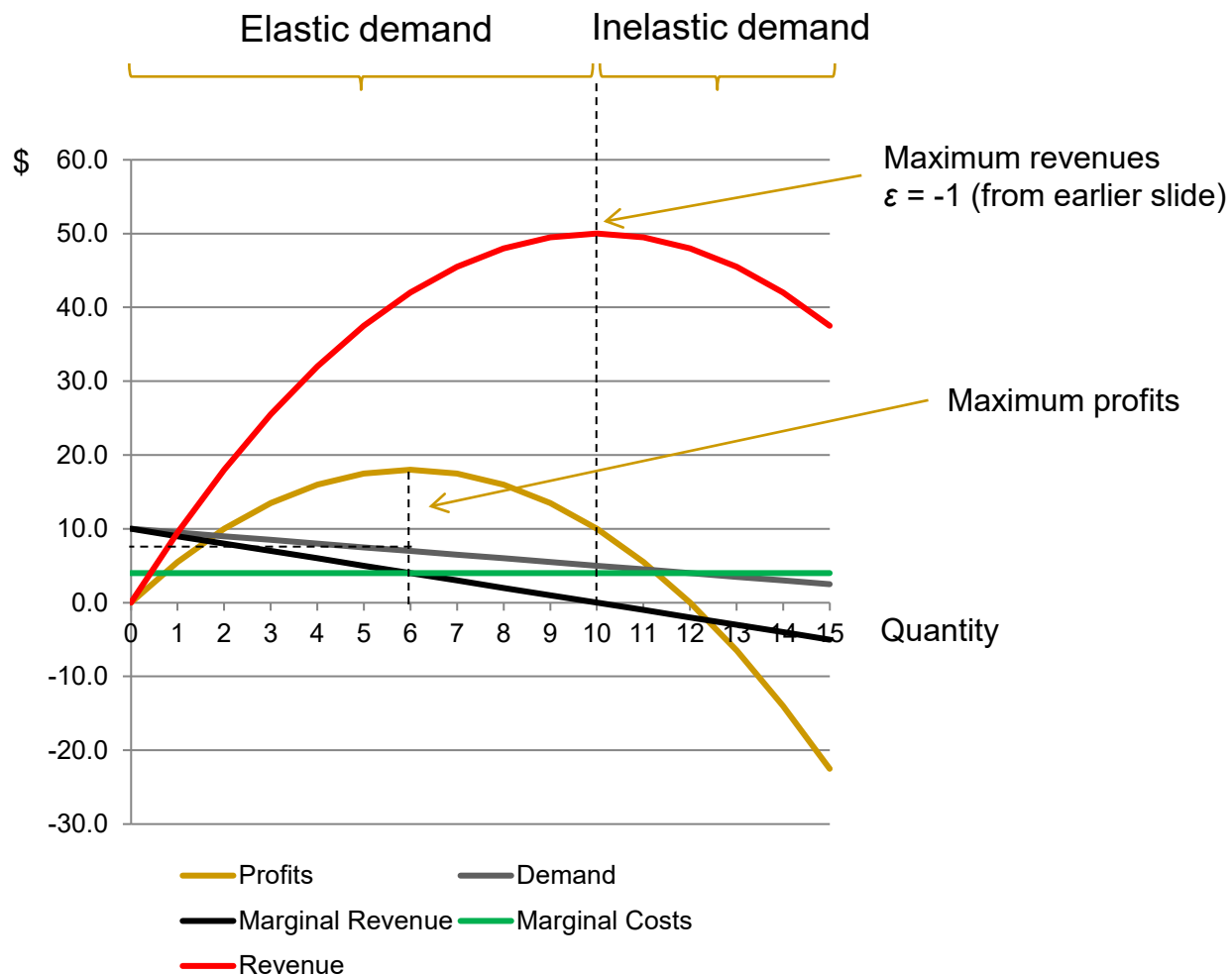
Monopolists and elasticities

■ Proposition

- A monopolist will not operate in the inelastic portion of its demand curve

Remember:

$$\varepsilon = \frac{\Delta q_i}{\Delta p_i} \frac{p_i}{q_i}$$

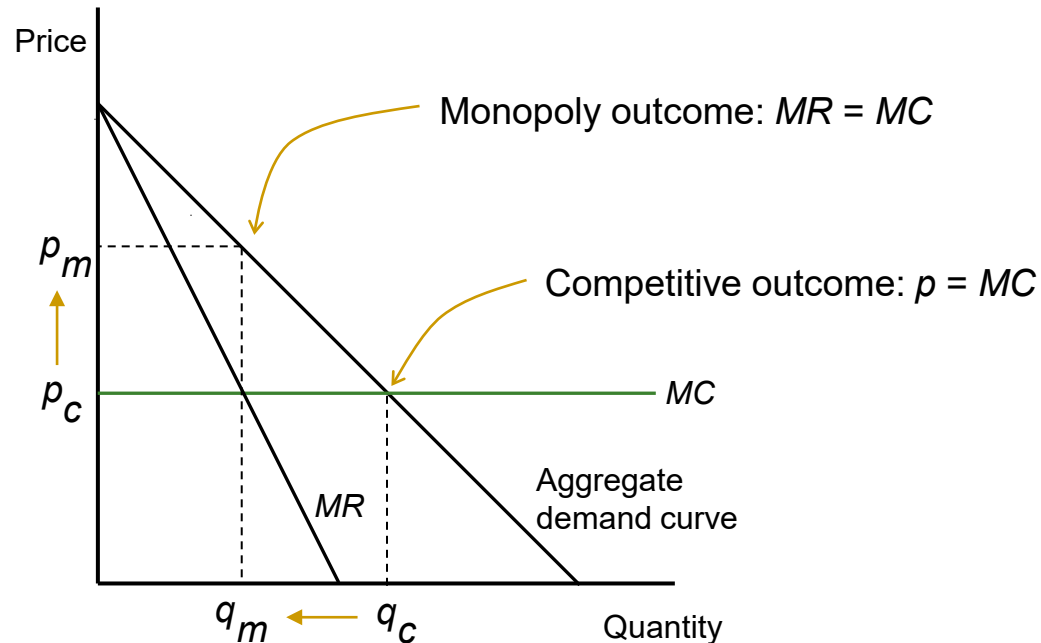


Review: Public policy on monopolies

- Modern view on why monopolies are bad:
 1. Increase price and decrease output
 2. Shift wealth from consumers to producers
 3. Create economic inefficiency (“deadweight loss”)
- May (or may not) have other socially adverse effects
 - Decrease product or service quality
 - Decrease the rate of technological innovation or product improvement
 - Decrease product choice

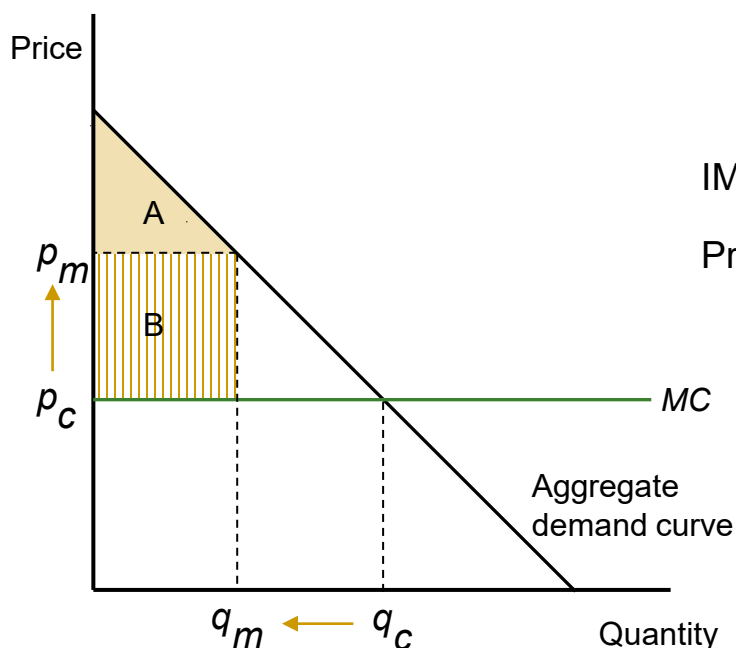
Review: Public policy on monopolies

- Output decreases: $q_c > q_m$
- Prices increase: $p_c < p_m$



Review: Public policy on monopolies

- Shifts wealth from inframarginal consumers to producers*
 - Total wealth created (“surplus”): $A + B$
 - Sometimes called a “rent redistribution”

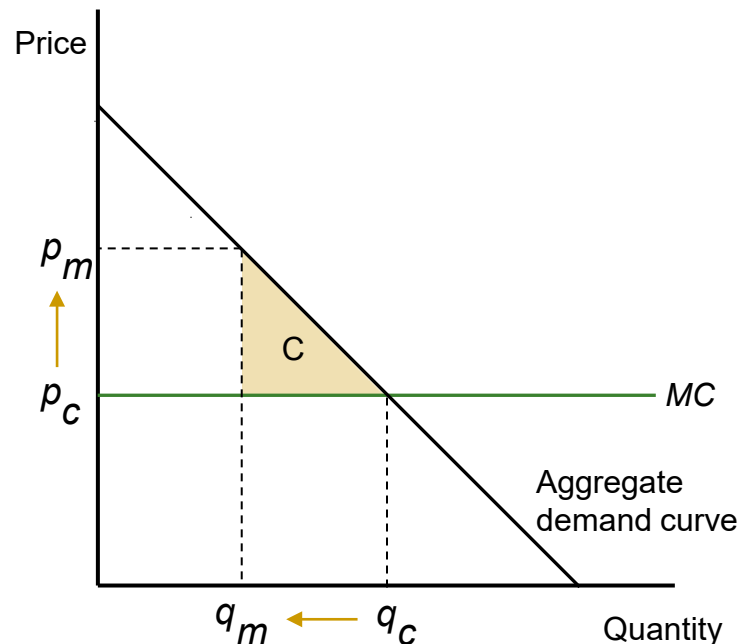


	Competitive	Monopoly
IM consumers	$A + B$	A
Producers	0	B

* Inframarginal customers here means customers that would purchase at both the competitive price and the monopoly price

Review: Public policy on monopolies

- “Deadweight loss” of surplus of marginal customers*
 - Surplus C just disappears from the economy
 - Creates “allocative inefficiency” because it does not exhaust all gains from trade



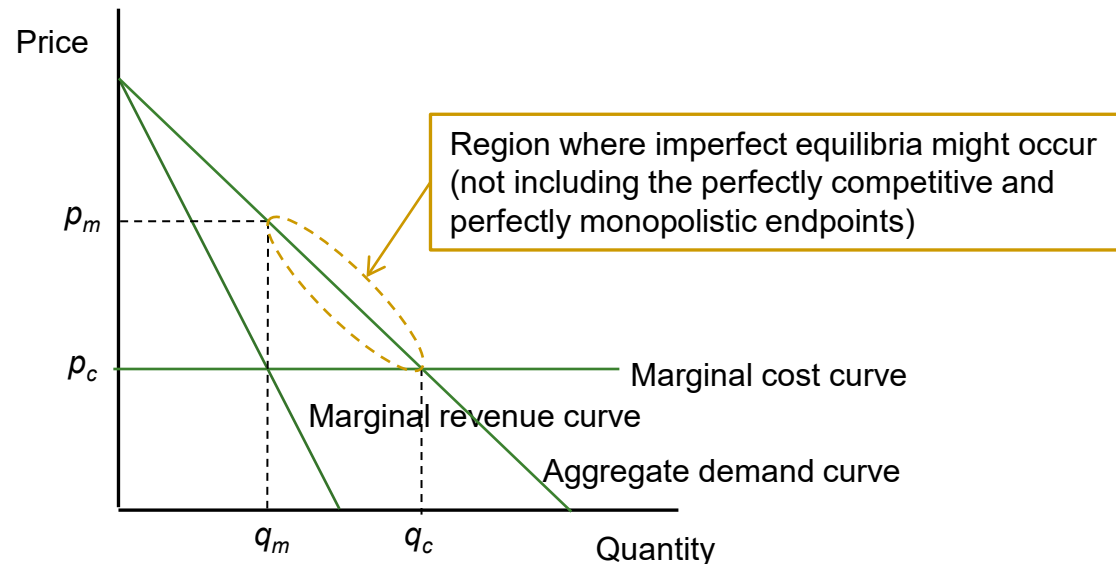
* Marginal customers here means customers that would purchase at both the competitive price and the monopoly price

Imperfectly Competitive Markets

Imperfectly Competitive Markets

■ Range of imperfect equilibria

- An imperfectly competitive equilibrium occurs when the equilibrium price and output on the demand curve falls strictly between the perfect monopoly equilibrium and the perfectly competitive equilibrium



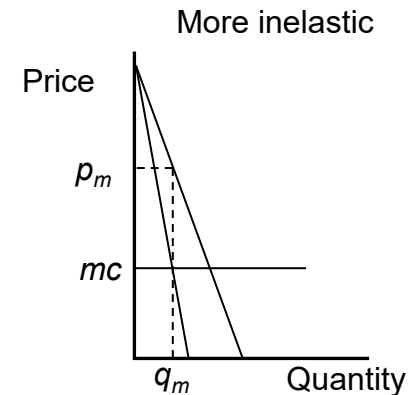
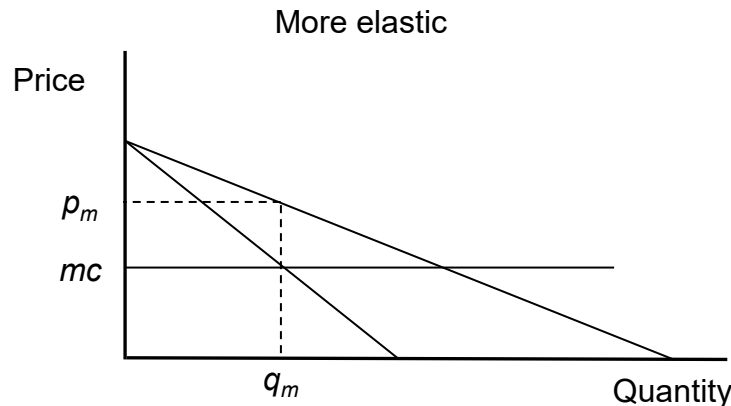
Market power

■ Measuring market power

- Economically, market power is the power of the firm to affect the market-clearing price through its choice of output level
- The traditional economic measure of market power is the *price-cost margin* or *Lerner index* L , which is a measure of how much price has been marked up as a percentage of price:

$$L = \frac{p - mc}{p}$$

- In a competitive market, $L = 0$ since because $p = mc$
- In a perfectly monopolized market, L increases as the aggregate demand curve becomes steeper (more inelastic):



Homogeneous product models

■ Homogeneous product models

- Assumes that products are undifferentiated (that is, *fungible* or *homogeneous*) in the eyes of the customer
- Common examples:
 - Ready-mix concrete
 - Winter wheat
 - West Texas Intermediate (WTI) crude oil
 - Wood pulp
- Two properties of homogeneous products
 1. Customers purchase from the lowest cost supplier → This forces all suppliers in the market to charge the same price (in the absence of search costs)
 2. Since the goods are identical, their quantities can be added:
 - Adding all individual consumer demands at price p gives aggregate demand $Q(p)$
 - Adding all individual firm outputs at price p gives aggregate supply
 - In equilibrium, the amount demanded equals the amount supplied:

$$Q(p) = \sum q_i(p)$$

Cournot oligopoly models

A control variable is the variable the firm can set (control) in its discretion

■ The setup

- The standard homogenous product model is the *Cournot model*
- In a Cournot model, the firm's control variable is *quantity*
 - The (downward-sloping) demand curve gives the relationship between the aggregate quantity produced Q and the market-clearing price p :

$$p = p(Q), \text{ where } Q = \sum_{i=1}^n q_i, \quad \text{in a market with } n \text{ firms}$$

- The profit equation for firm i is:

$$\pi_i = p(Q)q_i - T_i(q_i), \quad i = 1, 2, \dots, n$$

Each firm i chooses its level of output q_i , but the aggregate level of output determines the market prices

- First order condition (FOC) for profit-maximizing firm:

$$m\pi_i(q_i) = mr_i(q_i) - mc_i(q_i) = 0$$

This generates n equations in n unknowns and can be solved for each q_i

Cournot oligopoly models

- Production levels in Cournot models
 - A simple example
 - Compare the competitive, Cournot, and monopoly outcomes in this example

Demand curve: $Q = 100 - 2p$

	Price	Quantity
Perfectly competitive	5 (= mc)	90
Cournot ($n = 2$)	20	60
Perfect monopoly	27.5	45

- Note that the perfect monopoly output is one-half the perfectly competitive output (with linear demand and constant marginal costs)
- When demand is linear and there are n identical firms in a Cournot model, then:

$$Q_{\text{Cournot}} = \frac{n}{n+1} Q_{\text{Competitive}}$$

$q_{\text{competitive}}$	90	90	90	90	90	90	90	90	90
n	9	8	7	6	5	4	3	2	1
q_{cournot}	81	80	78.8	77.1	75	72	67.5	60	45

Cournot oligopoly models

■ Relationship of the Lerner index to the HHI

1. Define the firm i 's Lerner index to be:

$$L_i \equiv \frac{p - mc_i}{p} = \frac{s_i}{\varepsilon}$$

where s_i is the market share of firm i , ε is the own-elasticity of demand of the aggregate demand curve, and p is the market equilibrium price

2. Define the market Lerner index as the sum of the share-weighted individual firm Lerner indices. Then:

$$L \equiv \sum_{i=1}^n L_i s_i = \sum_{i=1}^N \left(\frac{s_i}{\varepsilon} \right) s_i = \sum_{i=1}^N \frac{s_i^2}{\varepsilon} = \frac{HHI}{\varepsilon}$$

where L is the market-share weighted sum of the L_i of the individual firms in the market

- **Key result:** In a Cournot model, the degree of exercise of market power in the market is a function of market concentration as measured by the HHI
- The Herfindahl-Hirschman Index (HHI), which is the principal measure of market concentration, is the sum of the squares of the markets shares of the firms in the market. That is:

$$HHI \equiv s_1^2 + s_2^2 + \cdots + s_N^2 = \sum_{i=1}^N s_i^2$$

The only thing on this slide
you really need to know

Bertrand oligopoly models

■ The setup

- In a Bertrand model, the firm's control variable is *price*
 - Compare with the Cournot model, where the firm's control variable is *quantity*
 - The (downward-sloping) residual demand curve gives the relationship between the firm's choice of price and the quantity consumers will demand from the firm at that price
- The profit equation for firm i is:

$$\pi_i(p_i) = \overbrace{p_i q_i(p_i)} - \overbrace{T_i(q_i(p_i))}, \quad i = 1, 2, \dots, n$$

This is the residual demand function for firm i

To see the first order conditions in operation, let's first look at profit-maximization for a monopolist whose control variable is price

Bertrand oligopoly models

■ Profits as a function of price: Example for a monopolist

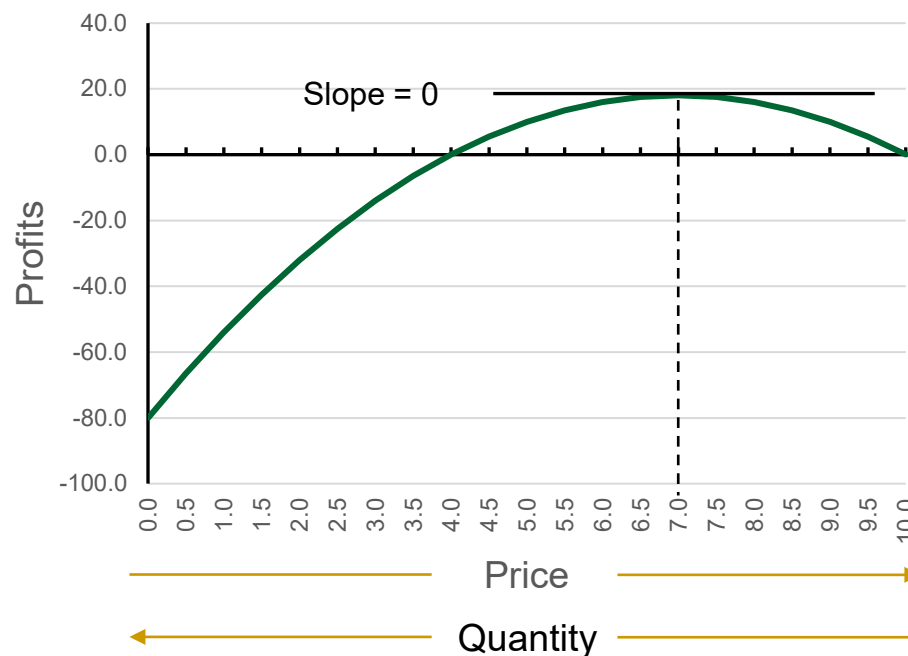
Price p	Quantity q	Revenues r	Costs T	Profits II
0.0	20	0.0	80	-80.0
0.5	19	9.5	76	-66.5
1.0	18	18.0	72	-54.0
1.5	17	25.5	68	-42.5
2.0	16	32.0	64	-32.0
2.5	15	37.5	60	-22.5
3.0	14	42.0	56	-14.0
3.5	13	45.5	52	-6.5
4.0	12	48.0	48	0.0
4.5	11	49.5	44	5.5
5.0	10	50.0	40	10.0
5.5	9	49.5	36	13.5
6.0	8	48.0	32	16.0
6.5	7	45.5	28	17.5
7.0	6	42.0	24	18.0
7.5	5	37.5	20	17.5
8.0	4	32.0	16	16.0

$$\text{Demand: } q = 20 - 2p$$

$$\text{Fixed costs} = 0$$

$$\text{Marginal costs} = 4$$

Profits as a Function of Price



Bertrand oligopoly models

■ Observations

- The profit curve for a monopolist as a function of price is a parabola
 - Although different in shape than the profit curve as a function of quantity
- The profit maximum is when the slope of the profit curve is zero
- So:
 - Marginal profits (as a function of price)
 - = Marginal revenues (as a function of price)
minus marginal costs (as a function of price)
 - = 0

Bertrand oligopoly models

■ Profit-maximization when a monopolist sets price: Example

Demand: $q = 20 - 2p$ Marginal costs ($mc(q)$) = 4
Fixed costs = 0

□ Revenues:

$$\begin{aligned} r(p) &= pq(p) \\ &= p(20 - 2p) \\ &= 20p - 2p^2 \end{aligned}$$

This describes the parabola on the prior slide

□ Marginal revenues:

$$mr(p) = 20 - 4p$$

Remember, if $y = ax + bx^2$ is the function, then the marginal function is $a + 2bx$

□ Cost:

$$\begin{aligned} C(q(p)) &= mc * q(p) = mc(20 - 2p) \\ &= 4(20 - 2p) \\ &= 80 - 8p \end{aligned}$$

Constant marginal cost

Note: If $y = a + bx$ is the function, then the marginal function is b

□ Marginal cost:

$$mc(p) = -8$$

NB: This is marginal cost as a function of p (not q). Why is it a negative number?

□ FOC: $mr(p^*) = mc(p^*)$

$$20 - 4p^* = -8$$

$$\text{So } p^* = 7 \text{ and } q^* = 6$$

Bertrand oligopoly models

- Homogeneous products case with equal cost functions
 - Consider two firms producing homogeneous (identical) products at constant marginal cost c and use price p_i as their control variable
 - Consumers also purchase from the lower priced firm
 - If both firms charge the same price, they split equally consumer demand
 - Profit function for firm i :

$$\pi(p_i) \left\{ \begin{array}{ll} = p_i Q(p_i) - c(Q(p_i)) & \text{if } p_i < p_j \\ = \frac{p_i Q(p_i) - c(Q(p_i))}{2} & \text{if } p_i = p_j \\ = 0 & \text{if } p_i > p_j \end{array} \right.$$

- That is, firm i gets 100% of market demand $Q(p_i)$ at price p_i if p_i is the lower price of the two firms; the two firms split the market demand if their prices are equal; and firm i gets nothing if it has the higher price
- *Equilibrium*: $p_1 = p_2 = mc$, so that both firms price at marginal cost (i.e., the competitive price) and split equally market demand and total market profits

Bertrand oligopoly models

- Homogeneous products case with asymmetric cost functions
 - Now consider two firms producing homogeneous (identical) products but with different cost functions costs, with firm 1 have lower marginal costs than firm 2 (i.e., $mc_1(q(p)) < mc_2(q(p))$)
 - The profit function is the same as before:

$$\pi(p_i) \left\{ \begin{array}{ll} = p_i Q(p_i) - c(Q(p_i)) & \text{if } p_i < p_j \\ = \frac{p_i Q(p_i) - c(Q(p_i))}{2} & \text{if } p_i = p_j \\ = 0 & \text{if } p_i > p_j \end{array} \right.$$

- *Equilibrium*: Firm 1 prices just below firm 2 and captures 100% of market demand
- *Idea*: Firm 1 and Firm 2 compete the price down to firm 2's marginal cost as in the symmetric cost case. Then firm 1 just underprices firm 2 and captures 100% of the market demand

Bertrand oligopoly models

■ Differentiated products case

- When products are differentiated, a lower price charged by one firm will not necessarily move all of the market demand to that firm
 - Consider a market with only red cars and blue cars
 - Some consumers like blue cars so much that even if the price of red cars is lower than the price of blue cars, there will still be positive demand for blue cars
 - Moreover, if the price of blue cars increases, some (inframarginal) blue car customers will purchase blue cars at the higher price, while some (marginal) customers will switch to red cars
 - This means that the demand for red cars (and separately for blue cars) is a function both of the price of red cars and the price of blue cars
 - It also means that the price of blue cars may not equal the price of red cars in equilibrium

Bertrand oligopoly models

■ Differentiated products case

□ Simple linear model

- Firms 1 and 2 produce differentiated products and face the following residual demand curves:

$$q_1 = a - b_1 p_1 + b_2 p_2$$

$$q_2 = a - b_1 p_2 + b_2 p_1$$

NB: Each firm's demand decreases with increase in its own price and increases with increases in the price of the other firm

Assume that $b_1 > b_2$, so that each firm's residual demand is more sensitive to its own price than to the other firm's price

- Assume each firm has a cost function with no fixed costs and the same constant marginal costs:

$$c_i(q_i) = cq_i$$

- Firm 1's profit-maximization problem:

$$\max_{p_1} \pi_1 = (p_1 - c)(a - b_1 p_1 + b_2 p_2)$$

NB: This formulation does not take into account firm 2's reaction to a change in Firm 1's price. It assumes that Firm 2's price is constant.

- Firm 2 solves an analogous profit-maximization problem

- Derive the FOCs for each firm and solve for the Bertrand equilibrium:

$$p_1^* = p_2^* = \frac{a + cb_1}{2b_1 - b_2}$$

You do not need to know this. What is important is how the model is set up.

Dominant firm with a competitive fringe

■ The setup

- Consider a homogeneous product market with—
 1. a *dominant firm*, with a control variable q and which sees its output decisions as affecting price and so sets output so that $mr = mc$, and
 2. a *competitive fringe* of firms that are small and act as price takers, that is, they do not see their individual choices of output levels as affecting price and therefore price as competitive firms (i.e., they set their production quantities q_i so that $p = mc(q_i)$)
- *Decision for the dominant firm*: Pick the profit-maximizing level for its output given the production of the competitive fringe
 - The model requires some constraint on the ability of the competitive fringe to expand its output. Otherwise, the competitive fringe will take over the market.
 - The constraint usually is either limited production capacity or increasing marginal costs

Dominant firm with a competitive fringe

■ The model

- At market price p , let $Q(p)$ be the industry demand function and $q_f(p)$ be the output of the competitive fringe.
- The dominant firm derives its residual demand function $q_d(p)$ starting with the aggregate demand function $Q(p)$ and subtracting the output supplied by the competitive fringe $q_f(p)$ at price p :

$$q_d(p) = Q(p) - q_f(p)$$

- The dominant firm then maximizes its profit given its residual demand function by solving the following equation for the market price p^* that maximizes the firm's profits:

$$\max_p \pi_D = p \times [Q(p) - q_f(p)] - T(q(p))$$

- The dominant firm then produces quantity $q^* = q_D(p^*)$

*You do not need to know how to solve the dominant firm maximization problem.
What is important is the how the model is set up.*

Dominant firm with a competitive fringe

- Dominant oligopolies
 - The model can be extended to the case where the dominant firm is replaced by a dominant oligopoly
 - The key is to specify the solution concept for the choice of output by the firms in the oligopoly (e.g., Cournot). You then create a residual demand curve for the oligopoly and apply the solution concept to that demand curve.
- Fringe firms
 - As we saw in Unit 2, the DOJ and the FTC typically ignore fringe firms. The dominant oligopoly model with a competitive fringe provides a theoretical justification.

Appendix

Mathematical notation

- pq : p times q (equivalently, $p \times q$, $p \cdot q$, and $(p)(q)$)
- $p(q)$: p evaluated when quantity is q (“ p as a function of q ”)
- $p(q)q$: p (evaluated at q) times q (i.e., pq)
- Δq : The change in q to the new state from the old state (i.e., $q_2 - q_1$)
- $\sum_{i=1}^n a_i$: The sum of the a_i 's (i.e., $a_1 + a_2 + \dots + a_n$)
- $\frac{\Delta y}{\Delta x}$: The change in y divided by the change in x
- $|a|$: The absolute value of a (i.e., a without a positive or negative sign) (e.g., $|3| = |-3| = 3$)
- \equiv : Like an equals sign but means a definition

Mathematical notation

Optional calculus terms

- $\frac{dy}{dx}$: The derivative of y with respect to x (where y is a function of x)
- $\frac{\partial y}{\partial x}$: The partial derivative of y with respect to x (where y is a function of x)
- Derivatives
 - If $y = a + bx + cx^2$
then the derivative of y with respect to x is $\frac{dy}{dx} = b + 2cx$

Class 11-13 slides

Unit 9: H&R Block/TaxACT

Part 1. Market Definition

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

October 14, 2022

The H&R BLOCK logo is displayed within a green square. The text "H&R" is on the top line and "BLOCK" is on the bottom line, both in white, bold, sans-serif capital letters. A registered trademark symbol (®) is located at the top right of the word "BLOCK".

**H&R
BLOCK®**

The TaxAct logo features the word "Tax" in red and "Act" in dark blue, both in a bold, sans-serif font. A stylized white 'X' is positioned between the two words. A registered trademark symbol (®) is located at the top right of the word "Act".

TaxAct®

The deal

■ H&R Block to acquire TaxAct

- ❑ Signed October 13, 2010
- ❑ \$287.5 million (all cash)

■ The buyer: H&R Block

- ❑ Missouri corporation headquartered in Kansas City, MO
- ❑ Employees: 7900 full-time (107,200 including seasonal employees)
- ❑ Revenues: \$3.8 billion
- ❑ Tax products
 1. Retail (filed 14.7 million returns)
 - ❑ Has a brick-and-mortar store within 5 miles of most Americans
 - ❑ 10,099 company-owned and franchised locations (average fee: \$190) (2011 10-K)
 2. Software products:
 - ❑ “H&R Block At Home” (2.2 million returns)
 3. Online tax preparation
 - ❑ “H&R Block At Home Online Tax Program” (3.7 million returns)



The deal

■ The target: TaxACT

- Delaware corporation headquartered in Cedar Rapids, Iowa
- Sells TaxACT-branded tax preparation products and services (5.2 million returns)
- “Freeium” business model—2010 Consumer product offerings:

2010 TaxACT Consumer Product Offerings

TaxACT Desktop (Download/CD)

[Free Federal Edition](#)

- Federal Software = FREE
- Federal Electronic Filing = FREE
- State Software = \$14.95
- State Electronic Filing = \$7.95

[Deluxe Federal Edition](#)

- Federal Software = \$12.95
- Federal Electronic Filing = \$7.95*
- State Software = \$14.95
- State Electronic Filing = \$7.95

[Ultimate Bundle - Deluxe & State](#)

- Federal & State Software = \$21.95
- Federal Electronic Filing = \$7.95*
- State Electronic Filing = \$7.95

TaxACT Online (Over the Web)

[Free Federal Edition](#)

- Federal Software = FREE
- State Add On = \$17.95
- E-Filing = FREE

[Deluxe Federal Edition](#)

- Federal Software = \$9.95
- State Add On = \$8.00
- E-Filing = FREE

[Ultimate Bundle \(Deluxe & State\)](#)

- Federal & State Software = \$17.95
- E-Filing = FREE

Tax preparation—Three methods

1. Manual (“pen and paper”)
2. “Assisted” preparation (hiring a tax professional or going to a retail tax store)
 - ❑ H&R Block operates the largest retail tax store chain in the U.S.
 - ❑ Jackson-Hewitt (retail tax stores)
 - ❑ Liberty Tax Service (retail tax stores)
 - ❑ Individual tax preparers
3. Digital “do-it-yourself” (DDIY) tax software—disks, downloads, and online (35-40 million returns)
 - ❑ *Intuit* (62.2%) — TurboTax
 - ❑ *H&R Block* (15.6%) — “H&R Block At Home” (6.69 million units sold)
 - ❑ *TaxACT* (12.8%) (5 million returns) — “Freemium”
 - ❑ *Others* (9.4%) [including TaxHawk/FreeTaxUSA (3.2%); TaxSlayer (2.7%)]

Deal rationale

■ H&R Block explanation

- Deal allows combined companies to reach more customers with different needs
 - Companies sell complementary products (in a business sense)
 - HRB: higher-end, higher-priced products
 - TaxACT: lower functionality, lower-priced products
 - Merged company will maintain both HRB and TaxACT brands (Op. 9)
 - Echoes of Hertz/Dollar Thrifty?

■ DOJ theory

- IRS was working to promote efilings
 - Partnering with digital tax preparation firms through the Free Software Alliance to create free or “value” products
 - But at request of the participating companies, the IRS imposed restrictions on which taxpayers could qualify for free products on the IRS web site
- TaxACT was the first company to offer a free DDIY product to all taxpayers for federal filings on its own website
- HRB concerned that “free” DDIY products would undermine HRB paid-DDIY products
- HRB targeted TaxACT for acquisition to eliminate a firm that threatened to disrupt HRB’s business model in order to maintain higher prices for paid products in the future

Deal rationale

■ IRS free filing program (public-private partnership)

IRS Free File Online: Browse All Offers

There are 8 IRS Free File Online providers for you to explore. For best results, use the [IRS Free File Online Lookup Tool](#). All offers are mobile-friendly.

Filter By [Reset Filters](#)

Adjusted Gross Income* Age Earned Income Tax Credit eligible? ☐ Yes ☐ No Active Military? ☐ Yes ☐ No Country of Residence State of Residence

There are 8 IRS Free File Online offers for you to explore.

FileYourTaxes.com
Free File

IRS Free File Program delivered by **FileYourTaxes.com**

AGI Between \$9,500 and \$73,000

Age 65 or younger

Free Fed Filing Any State of Residence

Free State Filing Free state return, for some states, if you qualify for the federal return

EITC Included if age and AGI criteria are met

Military Pay Included

Same criteria apply when filing with a foreign address

[VIEW THIS OFFER](#)

TaxAct
IRS Free File Program

IRS Free File Program delivered by **TaxAct**

AGI \$65,000 or less

Age 56 or younger

Free Fed Filing Any State of Residence

Free State Filing Free state return, for some states, if you qualify for the federal return

EITC Included if age and AGI criteria are met

Military Pay Included

Same criteria apply when filing with a foreign address

[VIEW THIS OFFER](#)

IRS Free File Program
delivered by **ezTaxReturn.com**

IRS Free File Program delivered by **ezTaxReturn.com**

AGI \$73,000 or less

Age Any

Free Fed Filing AL, AR, AZ, CA, CO, GA, IL, LA, MA, MD, MI, MO, MS, NC, NJ, NY, OH, PA, SC, VA, WI

Free State Filing No free state tax preparation in any states

EITC Included if AGI criterion is met

Military Pay Included if AGI criterion is met

[VIEW THIS OFFER](#)

FreeTaxUSA®

IRS Free File Program delivered by **FreeTaxUSA®**

AGI \$41

Age Any

Free Fed Filing Any

Free State Filing Res

EITC Incl

Military Pay Incl

[VIEW THIS OFFER](#)

Important: You are responsible for determining your eligibility for one of the Free File online offers. The tool does not ask you to provide sensitive information like your name, Social Security number, address, or bank account numbers. The IRS does not save, record, or share your information. The IRS discards your information when you exit this program.

Downloaded October 6, 2022

DOJ complaint

- *Filed:* May 23, 2011
 - Seven months after the signing of the merger agreement
 - *Claim:* Acquisition, if consummated, would violate Section 7:
 - 3 → 2 in digital “do-it-yourself” tax software (disks and online)
 - Note that the DOJ did not consider the “fringe” firms
 - Would result in a duopoly of Intuit (62.2%) and H&R Block (28.4%)
 - 2FCR = 90.2%
 - Next largest firm: TaxHawk (3.2%)
 - Theories of anticompetitive harm:
 - Coordinated effects
 - Unilateral effects
- Will discuss in the last two classes of this unit
- *Prayer:* Permanent injunctive relief blocking the transaction

DOJ strategy

1. Narrow relevant market to DDIY products

2. Use *PNB* presumption to establish the prima facie case

Intuit	62.2%
HRB	15.6%
TaxACT	12.8%

Combined share = 28.4%
 $\Delta \approx 400$
Premerger HHI = 4276
Postmerger HHI = 4675

This is not quite right.
Anyone see the problem?

$$\begin{aligned} HHI &= \sum_{i=1}^n s_i^2 \\ &= 62.2^2 + 15.6^2 + 12.8^2 \\ &= 4276 \text{ (premerger)} \end{aligned}$$

3. Present supporting evidence and reasoned economic arguments on anticompetitive effect for strengthen the showing of anticompetitive effect

- To follow Merger Guidelines and to make the case more persuasive
- Focus on likely price effects (why?)

4. Anticipate and rebut likely defenses

- Should know from arguments made by parties in the HSR merger review
 - Barriers to entry to defeat an anticipated entry defense
 - Lack of sufficient cognizable efficiencies to defeat an efficiencies defense

5. Press the public equities

- The public equities will always win (especially on a permanent injunction where the court has found that the merger would violate Section 7)

Merger parties' strategy

1. Expand relevant product market to all tax preparation methods to negate the use of the *PNB* presumption

- ❑ Argue functional substitutability for expanded market

2. Shares in expanded market too low to trigger *PNB* presumption

- ❑ All tax preparation methods: 140 million returns total
- ❑ HRB
 - ≈ 6.69 million DDIY (4.8%) + 14.7 million assisted (10.5%)
 - ≈ 21.39 million returns (15.3%)
- ❑ TaxACT ≈ 5 million returns (3.6%)

Combined share: 18.9%
Delta: 110

Very low for a challenge
notwithstanding high
postmerger HHI

3. Rebut explicit theories of anticompetitive effect

- ❑ Market not susceptible to coordinated effects
- ❑ Merger would not create anticompetitive unilateral effects

4. Offer downward pricing pressure defenses

- ❑ Entry defense
- ❑ Post-merger efficiencies offset any upward pricing pressure

5. Largely ignore equities—Cannot defeat the DOJ on this element

The trial

- DIOJ complaint
 - Filed May 23, 2011
 - In the District of Columbia
- Judge Beryl A. Howell
 - Nominated by President Barack Obama
 - Sworn in: December 27, 2010
 - Currently Chief Judge (since March 17, 2016)
- Trial
 - Parties stipulated to a TRO—proceeded to trial on the merits
 - Court consolidated proceedings under Rule 65(a)(2)
 - Trial began on September 6, 2011 (nine days)— 4 months after complaint filed
 - 8 fact witnesses/3 expert witnesses
 - Additional testimony by affidavit and deposition
 - 800 exhibits from each side
 - Decision: Permanent injunction ordered on October 31, 2011 (originally filed under seal)
 - < 6 months after complaint filed



A Little Law

Clayton Act § 7

- Clayton Act § 7 provides the U.S. antitrust standard for mergers

No person engaged in commerce or in any activity affecting commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another person engaged also in commerce or in any activity affecting commerce, where in **any line of commerce** or in any activity affecting commerce **in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.**¹

- Essential elements of a Section 7 violation

1. Acquisitions of stock or assets that,
2. “in any line of commerce” (product market)
3. “in any part of the country” (geographic market)
4. The effect of the acquisition “may substantially lessen competition or tend to create a monopoly”

Called the *relevant market*

Called the *anticompetitive effects test*

¹ 15 U.S.C. § 18 (emphasis added; remainder of section omitted).

Proving the prima facie case

- Three elements:
 1. *Product market definition*: Courts broadly look at two types of indicia in evaluating evidence on the relevant product market—
 - a. The “*Brown Shoe* factors”
 - b. The “hypothetical monopolist test”
 2. *Geographic market definition*: Courts broadly look at two types of indicia in evaluating evidence on the relevant geographic market—
 - a. “The area of effective competition”
 - i. The area where customers of the merging firms can practically turn to alternative suppliers (when customers travel to suppliers—think retail stores)
 - ii. The area where alternative suppliers exist that can practically service the customers of the merging firm (when suppliers travel to customers—think plumbers)
 - b. The “hypothetical monopolist test”
 3. *Anticompetitive effect*: Courts broadly look at two types of indicia in evaluating evidence on the relevant geographic market
 - a. The *Philadelphia National Bank* presumption
 - b. Explicit theories and supporting direct and circumstantial evidence of likely anticompetitive harm resulting from the merger

*Before turning to market definition, we need to examine the
Philadelphia National Bank presumption*

The *PNB* presumption

“This intense congressional concern with the trend toward concentration warrants dispensing, in certain cases, with elaborate proof of market structure, market behavior, or probable anticompetitive effects. Specifically, we think that a merger which **produces a firm controlling an undue percentage share of the relevant market**, and **results in a significant increase in the concentration of firms** in that market is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.”¹

❑ Requires—

- The combined firm to pass some (unspecified) threshold of *market share*, and
- The *increase in market concentration* caused by the transaction

NB: The opinion was careful to note that it was not setting a lower bound and that commentators had suggested 20% as a threshold of “undue” market share

❑ Supposed to reflect the latest in economic thinking in the then-prevailing structure-conduct-performance paradigm

- “[T]he test is fully consonant with economic theory.”²
- “[C]ompetition is greatest when there are many sellers, none of which has any significant share.”³

¹ United States v. Philadelphia National Bank, 374 U.S. 321, 363 (1963).

² *Id.* (citing extensively to structure-conduct-performance literature).

³ *Id.*

The *PNB* presumption: Background

- Application in *Philadelphia National Bank*
 - Combined firm had at least a 30% share in the relevant market
 - Enough for an “undue market share”
 - Share of the two largest banks in the relevant market would increase from 44% to 59%
 - Enough for a “significant increase” in market concentration
 - Therefore, the *PNB* presumption was satisfied
 - Nothing in record to rebut presumption
 - District court misplaced reliance on testimony that competition was vigorous and would continue to be vigorous (problem too complex; witnesses failed to give “concrete reasons” for conclusions)

The *PNB* presumption: Background

- The Supreme Court in the 1960s was very aggressive on the market share thresholds of the *PNB* presumption
- Some (infamous) early Supreme Court precedents
 - Brown Shoe/Kinney (1962)¹ (pre-*Brown Shoe*)
 - Combined share of as little as 5% in an unconcentrated market
 - Von's Grocery/Shopping Bag Food Stores (1966)²
 - 4.7% (#3) + 4.2% (#6) → 8.9% (#2) in an unconcentrated market
 - Pabst Brewing/Blatz Brewing (1966)³
 - 3.02% (#10) + 1.47% (#18) → 4.49% (#5) in an unconcentrated market

Bottom line: Through the 1960s and into the 1970s, antitrust law prohibited most significant horizontal mergers and acquisitions

¹ Brown Shoe Co. v. United States, 370 U.S. 294 (1962).

² United States v. Von's Grocery Co., 384 U.S. 270 (1966).

³ United States v. Pabst Brewing Co., 384 U.S. 546 (1966).

The *PNB* presumption: Background

- Status of the *PNB* presumption as of the late 1970s
 - *General Dynamics* (1974) had returned to a rebuttable presumption
 - BUT
 - There was no meaning test of market definition
 - The market share triggers remained very low
 - The evidence sufficient to rebut the presumption remained generally undefined
 - Courts tended to defer to the market definitions advanced by the DOJ and FTC
 - The “Potter Stewart rule” continued to hold notwithstanding *General Dynamics*

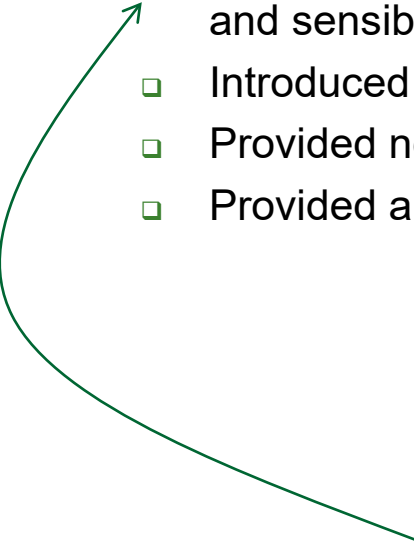
The sole consistency that I can find is that in litigation under [Section 7], the Government always wins.¹

¹ United States v. Von's Grocery Co., 384 U.S. 270, 301 (1966) (Stewart, J., dissenting).

The *PNB* presumption: Background

■ 1982 DOJ Merger Guidelines

- Introduced the *hypothetical monopolist test* to provide an economically rigorous and sensible means of defining markets in the context of the *PNB* presumption
- Introduced the HHI as the measure of market concentration
- Provided new market share thresholds to be used by the DOJ
- Provided a catalog of defenses to rebut the presumption



This is why we needed to introduce the PNB presumption before examining market definition

Baker-Hughes¹

■ Uses a three-step burden shifting approach:

1. The plaintiff bears burden of proof in market definition and in market shares and market concentration within the relevant market sufficient to trigger the *PNB* presumption and thereby prove a prima facie Section 7 violation
 - More generally, this should be the burden of proving a prima facie case (whether or not the *PNB* presumption or other evidence is invoked to show anticompetitive effect)
 - You can think of the burden here as the *burden of production*, that is, the plaintiff must adduce sufficient evidence to allow the trier of fact to find each and every essential element of a Section 7 violation
 - Essential elements
 1. The relevant product market
 2. The relevant geographic market
 3. The requisite anticompetitive effect in the relevant market
2. If the plaintiff satisfies this burden, the *burden of production* shifts to defendants to adduce evidence sufficient to rebut *PNB* presumption and create a genuine issue for the trier of fact
 - a. Negate the plaintiff's market definition
 - b. Rebut the predicates of the *PNB* presumption and other evidence of gross anticompetitive effect
 - c. If applicable, provide evidence of one or more downward-pricing pressure defenses

Also need to satisfy the interstate commerce element, but this is rarely contested

¹ United States v. Baker Hughes Inc., 908 F.2d 981, 982-83 (D.C. Cir. 1990).

*Baker-Hughes*¹

- Uses a three-step burden shifting approach:
 3. *The burden of persuasion* then returns to plaintiff to prove in light of all of the evidence in the record that the merger is reasonably probable to have an anticompetitive effect in the relevant market

Market definition procedurally

■ Question of fact

- The determination of the boundaries of the relevant market is a question of fact

■ Burden of proof on the plaintiff

- Bears the burden of proving a *prima facie* relevant market in Step 1 of *Baker Hughes*
 - Essentially a burden of production
- Bears the *burden of persuasion* on relevant market in Step 3 of *Baker Hughes*

■ Motion to dismiss: *Twombly* applies

- The complaint must contain sufficient factual allegations to make the alleged market definition plausible under the market definition standards in the case law
- The plaintiff's failure in a complaint to adequately plead the factual predicates of market definition will result in the complaint's dismissal under FRCP 12(b)(6)
- However, *Twombly* challenges are typically not brought where—
 1. The defendants are not likely to ultimately challenge the plaintiff's definition of the relevant market, *or*
 2. It is easy for the plaintiff to replead the complaint and supply the missing factual allegations to support its alleged market definition
- More generally, motions to dismiss are rare in preclosing merger antitrust challenges
 - Merging parties want to proceed to the merits as quickly as possible

Market definition procedurally

■ Forward looking

- Since merger antitrust law is forward-looking—that is, it makes unlawful mergers and acquisitions that are likely to lessen competition substantially in the future as compared to what competitive conditions would have been absent the transaction—market definition equally must be forward-looking
- Product market definition, for example, should account for new products that shortly will be released or old products that will soon be obsolete
- Likewise, geographic market definition should account for the construction of new facilities, changing transportation modes or patterns, or new methods of purchasing or distribution

■ Appeal

- As a finding of fact, district court ruling reviewed under the “clearly erroneous” rule
- FTC findings reviewed under the “substantial evidence” rule

Market definition: A debate

- Is the proof of a relevant market really necessary?
 - Some commentators argue that direct evidence of anticompetitive harm should obviate the need to prove the relevant market
 - For example, say the challenge is to a consummated merger and that the plaintiff can prove the merger resulted in a substantial price increase
 - Opponents of this view argue that the terms of Section 7 explicitly require the showing of the product and geographic dimensions of a relevant market
 - Views of the DOJ and FTC
 - The DOJ and FTC agree that the determination of a relevant market is not necessary in order to prove the requisite anticompetitive effect in the vast majority of mergers
 - BUT they have not been willing to test whether they can dispense with the market definition elements in court
 - Courts
 - Have not had to decide a case on precisely point
 - BUT perhaps the rigor with which a relevant market needs to be defined may depend on whether market shares will play a significant role in the competitive effects analysis
 - WDC view
 - Courts will require proof of a relevant market in all Section 7 cases
 - BUT will not be too demanding on the dimensions of the market if market shares and market concentration statistics are not being using to prove anticompetitive effect

Market Definition

Part 1: The judicial tests

Introduction

■ Two dimensions

- Every relevant market has two dimensions:

- *The product dimension*: The products within the market (the *relevant product market*)
- *The geographic dimension*: The geographic area covered by the market (the *relevant geographic market*)

■ The relevant market in H&R Block/TaxACT

- The parties stipulated that the relevant geographic market was the United States
 - It is common for the parties to stipulate to the relevant markets
 - *Some exceptions*:
 - The relevant market is frequently a major issue in “retail” deals (where individuals travel to the business location—think retail stores, banks, hospitals)
 - It can also be an issue when products trade internationally—Is the relevant geographic market national or global?
- The dimensions of the product market was the central issue in the case

One or both market dimensions almost always will be a major issue in any litigated case. Empirically, disproof of the plaintiff’s market definition is the major reason plaintiffs fail in merger antitrust cases.

*We will focus on product market definition in this unit
and geographic market definition in the next unit*

Product markets generally

- What is a relevant product market?
 - A relevant product market defines the product boundaries within which competition meaningfully exists¹
 - Although discussed in terms of products, the product market concept equally applies to services or a mixed combination of a product with accompanying services
- Modern concept of relevant markets
 - Products in the relevant market should exert significant price pressure on one another
 - That is, an increase in the price of one of the products in the market should cause customers to switch to other products in the market, and this loss of sales should result in the price increase being unprofitable.
 - Some definitions
 - *Inframarginal customers* continue to buy the product after the price increase
 - *Marginal customers* would buy the product at the original price but not at the increased price
- The showing of the relevant market(s) is an essential element of every Section 7 violation
 - The plaintiff must make a prima facie showing of a relevant market as part of its prima facie case and bears the ultimate burden of persuasion

¹ United States v. Continental Can Co., 378 U.S. 441, 449 (1964).

Two complementary tests in judicial analysis

1. The “outer boundaries” and “practical indicia” criteria of *Brown Shoe*¹
2. The hypothetical monopolist test of the Merger Guidelines²

¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

² U.S. Dep’t of Justice & Fed. Trade Comm’n, Horizontal Merger Guidelines § 4 (rev. Aug. 19, 2010).

The *Brown Shoe* Tests

Brown Shoe “outer boundaries” test

■ *Brown Shoe*:

The outer boundaries of a product market are determined by **the reasonable interchangeability of use** or the **cross-elasticity of demand** between the product itself and substitutes for it.¹

- This remains the prevailing definition of a relevant product market in the case law
- Key indicia—
 1. Reasonable interchangeability of use
 2. [High] cross-elasticity of demand
- Modern usage
 - Reasonable interchangeability of use has largely come to mean high cross-elasticity of demand and is no longer a distinct “outer boundary” factor

¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962) (emphasis added).

Brown Shoe “outer boundaries” test

■ General idea

- In a horizontal merger, the relevant product market should—
 1. *Start* with the overlapping products of the merging firms
 2. *Contain* all products that exhibit a reasonable interchangeability of use and a high cross-elasticity of demand with one another
 3. *Exclude* all products that lack reasonable interchangeability of use and have a low cross-elasticity of demand with products in the relevant product market

The Brown Shoe test is intended to isolate all and only those products that exert significant price-constraining force on the overlapping products of the merging parties

¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962) (emphasis added).

Brown Shoe “practical indicia” test

■ Submarkets and “practical indicia” of relevant markets

However, within this broad market [defined by reasonable interchangeability of use and high cross-elasticity of demand], well-defined **submarkets** may exist which, in themselves, constitute product markets for antitrust purposes. The boundaries of such a submarket may be determined by examining such **practical indicia** as

- [1] industry or public recognition of the submarket as a separate economic entity,
- [2] the product’s peculiar characteristics and uses,
- [3] unique production facilities,
- [4] distinct customers,
- [5] distinct prices,
- [6] sensitivity to price changes, and
- [7] specialized vendors.¹

¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

Brown Shoe “practical indicia” test

- Submarkets and “practical indicia” of relevant markets
 - This list of “practical indicia” was not intended to be exhaustive
 - Some additional factors that courts typically consider—
 1. Relative prices of products in the candidate market
 - A Timex and a Rolex both tell time, but they are unlikely to exhibit a high cross-elasticity of demand with on another
 2. Different functional attributes that might appeal to different classes of buyers
 - Consider the functional difference between a Ferrari 812 (0-60 mph: 2.8 sec.; top speed: 211 mph) and a Nissan Versa S (0-60 mph: 10.2 sec.; top speed: 119 mph)
 - Differences in functionality are often accompanied by differences in price (Ferrari 812 base price: \$ 401,500; Nissan Versa S base price: \$15,080)
 3. Differences in reputation
 - Even without functional differences
- Problems with the *Brown Shoe* “practical indicia” test
 - The list provides some factors to consider, but does not say what weight they should be given or give any other analytical technique to apply them to determine the boundaries of submarkets
 - This created an enormous amount of confusion, bad analysis, and bad decisions

Brown Shoe submarkets: The modern view

- Submarkets (surprisingly) remain a valid concept in antitrust law
 - Courts still employ the concept, but with decreasing regularity
- But most courts view submarkets as no different than a relevant market
 - Under this view, the *Brown Shoe* “practical indicia” are simply circumstantial evidence probative of reasonable interchangeability of use and cross-elasticity of demand
 - Courts routinely rely on the *Brown Shoe* factors to define the relevant product market in merger and other antitrust cases
- Since 1982, the merger guidelines have rejected submarkets as distinct from markets

The Hypothetical Monopolist Test

Hypothetical monopolist test (HMT)

■ The original idea

□ The relevant market should be—

1. the *smallest group of products* containing the products of interest (say, the products of the merging firms in a horizontal merger)
2. in which a hypothetical monopolist of those products *could raise prices profitably* over the current level
3. by at least “*small but significant nontransitory*” amount

□ Observations

- Introduced in the 1982 DOJ Merger Guidelines
- Designed to introduce some economic sense and analytical rigor into market definition
- Continued in the subsequent merger guidelines (although with some important modifications)
- “SSNIP” = “Small but significant nontransitory increase in price”
 - Under the Merger Guidelines, a SSNIP is usually taken to be a price increase of 5% for at least one year

□ General idea

- If a hypothetical monopolist—effectively the merger of all firms in the candidate market—could not anticompetitively affect prices, then a fortiori a merger of only two firms in the candidate market could not affect prices
- Accordingly, the candidate market should be accepted as a relevant market only if a hypothetical monopolist could raise prices profitably
 - Is this a *necessary condition* or a *necessary and sufficient condition* for a relevant market?

HMT: Example

■ Example:

□ Say a hypothetical monopolist—

- Faces an (inverse) demand: $p = 10 - \frac{1}{2}q$
- Has no fixed costs and constant marginal costs of 4 per unit of production
- Prevailing (premerger) price: $p_1 = 5$

Question: If the current market price is 5, would a SSNIP—usually taken to be 5%—be profitable?

□ We know how to do this:

- Apply the incremental profitability test we examined in Unit 8 to determine if the gross loss in profits from the lost marginal sales are outweighed by the gross gain in profits from the higher profit margins earned on the retained inframarginal sales
- Steps
 1. Set up the problem with what you know
 2. Figure out what you need
 3. Solve for the variables you need using the parameters given in the problem and the demand curve
 4. Solve for net incremental profits

If incremental profits are positive, the hypothetical monopolist can profitably increase price by 5% and satisfies the HMT

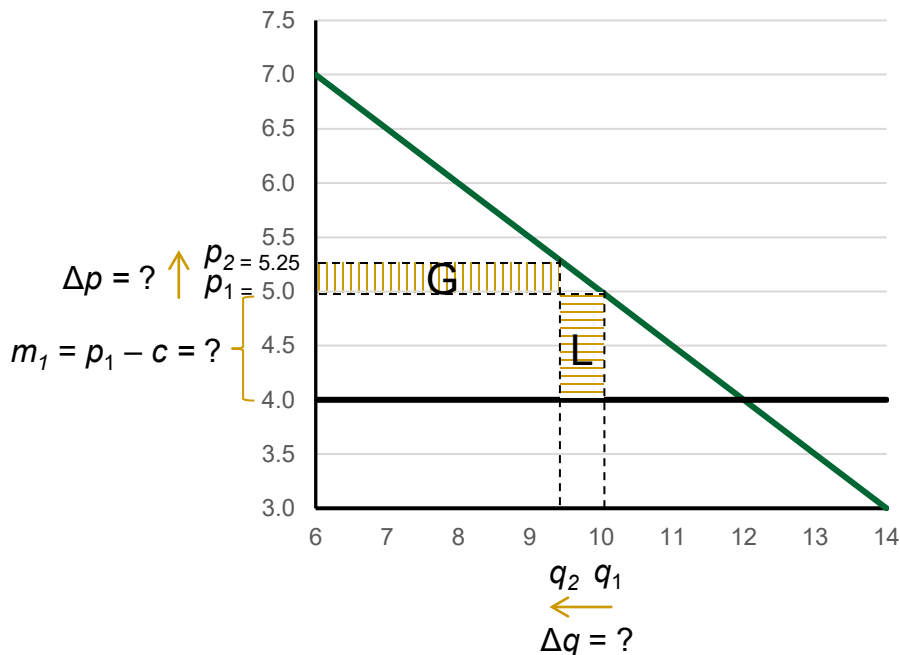
HMT: Example

- Step 1. Set up the problem with what you know:
 - (Inverse) demand: $p = 10 - \frac{1}{2} q$
 - Prevailing (premerger) price: $p_1 = 5$
 - SSNIP = 5%
 - Constant marginal cost $c = 4$

HMT: Example

■ Step 1. Set up the problem:

- (Inverse) demand: $p = 10 - \frac{1}{2} q$
- Prevailing (premerger) price: $p_1 = 5$
- SSNIP = 5%
- Constant marginal cost $c = 4$



Step 2: Figure out what you need:

1. Need the gross gain on inframarginal sales that will be retained (Area G):

$$\begin{aligned} \text{Area G} &= \text{price increase } (\Delta p) \\ &\quad \text{times inframarginal sales } (q_2) \\ &= \Delta p q_2 \end{aligned}$$

2. The gross loss on marginal sales that will be lost (Area L):

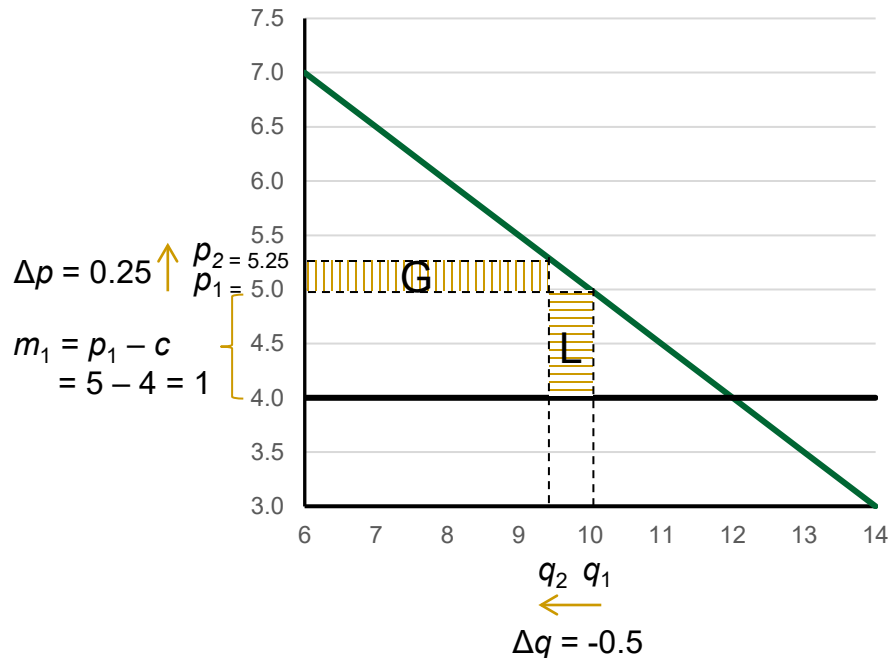
$$\begin{aligned} \text{Area L} &= \text{gross margin on marginal sales } (m_1) \\ &\quad \text{times (lost) marginal sales } (\Delta q) \\ &= m_1 \Delta q \end{aligned}$$

So need q_1 , q_2 , Δq , Δp , p_2 , and m_1

HMT: Example

■ Set up the problem:

- (Inverse) demand: $p = 10 - \frac{1}{2}q$
- Prevailing (premerger) price : $p_1 = 5$
- SSNIP = 5%
- Constant marginal cost $c = 4$



Step 3. Solve for the variables you need using the parameters given in the problem and the demand curve:

$$q = 20 - 2p \text{ (from the inverse demand curve)}$$

$$q_1 = 10 \text{ (when } p_1 = 5)$$

$$\Delta p = 0.25 \text{ (applying 5\% SSNIP to } p_1 = 5)$$

$$p_2 = 5.25 (= p_1 + \Delta p)$$

$$q_2 = 9.5 \text{ (from demand curve with } p_2 = 5.25)$$

$$\Delta q = q_2 - q_1 = 9.5 - 10 = -0.5$$

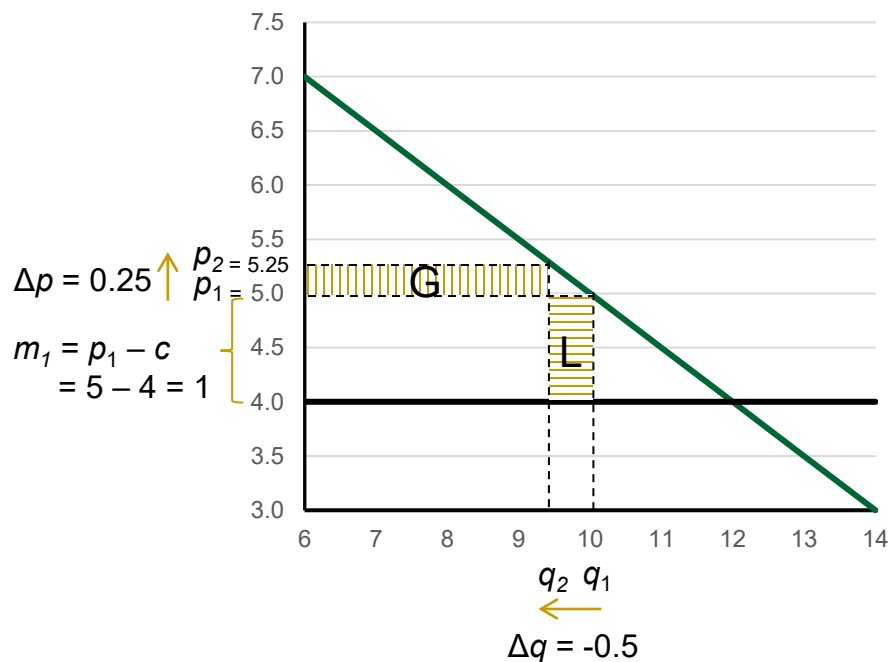
$$m_1 = p_1 - c = 5 - 4 = 1$$

HMT: Example

■ Set up the problem:

- (Inverse) demand: $p = 10 - \frac{1}{2}q$
- Starting point: $p_1 = 5$
- SSNIP = 5%
- Constant marginal cost $c = 4$

$$\begin{aligned}
 q &= 20 - 2p \text{ (from the inverse demand curve)} \\
 q_1 &= 10 \text{ (when } p_1 = 5) \\
 \Delta p &= 0.25 \text{ (applying 5\% SSNIP to } p_1 = 5) \\
 p_2 &= 5.25 (= p_1 + \Delta p) \\
 q_2 &= 9.5 \text{ (from demand curve with } p_2 = 5.25) \\
 \Delta q &= q_2 - q_1 = 9.5 - 10 = -0.5 \\
 m_1 &= p_1 - c = 5 - 4 = 1
 \end{aligned}$$



Step 4. Solve for net incremental profits

$$\text{Area G} = q_2 \Delta p = (9.5)(0.25) = 2.375$$

$$\text{Area L} = m_1 \Delta q = (1)(-0.5) = -0.5$$

$$\begin{aligned}
 \text{Incremental profits} &= \text{Area G} - \text{Area L} \\
 &= 2.375 - 0.5 = 1.875
 \end{aligned}$$

Therefore, a price increase of 5 percent above the current level is profitable and the HMT is satisfied

HMT: Recap

■ The question

- Can a hypothetical monopolist of a group or products (a *candidate market*) profitably increase the price of those products by a small but significant nontransitory amount (a *SSNIP*)?

■ The test: If the incremental profits from the price increase are—

- *Positive*: The price increase is profitable and the HMT is satisfied
- *Negative*: The price increase is unprofitable and the HMT fails

■ The accounting: Incremental profits

- = The gain from the increased margin (Δp) on the inframarginal sales (q_2) *minus* the loss of margin ($p_1 - c$) on the marginal sales (Δq)
- = $\Delta p \times q_2 - (p_1 - c) \times \Delta q$

■ The data

- The statement of the problem will give you p_1 , q_1 , c , the SSNIP, and some indication of how demand changes with an increase in price
- Those variables will permit you to calculate Δp , q_2 , Δq , and net incremental profits

Hypothetical monopolist test

- Example—Uniform price increase on all products in the candidate market

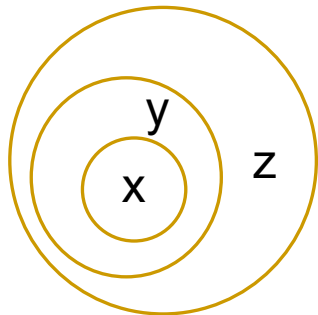
Consider blue cars (a homogeneous product) as a candidate market. Say blue cars are priced at \$20,000 per car, cost \$17,000 per car to produce, and sell 50,000 cars per year. If the price is increased by 5% on all blue cars, blue cars will only sell 45,000 cars per year. Are blue cars a relevant market under the hypothetical monopolist test for a 5% SSNIP?

Data			Incremental profit on inframarginal sales (area G)		
Unit sales (q1)	50,000	From problem	Inframarginal sales	45,000	
Price (p1)	\$20,000	From problem	\$SSNIP	<u>\$1,000</u>	p1 times q1
Unit cost (c)	\$17,000	From problem	Incremental gross profits	\$45,000,000	Difference
\$Margin (\$m)	\$3,000	Calculated			
			Incremental loss of profit on marginal sales (area L)		
Retained sales (q2)	45,000	From problem	Marginal sales	-5,000	Δq
Lost (marginal) sales (Δq)	5,000	Calculated	\$Margin	<u>\$3,000</u>	\$m
%SSNIP	5%	From problem	Incremental gross losses	-\$15,000,000	\$m times Δq
\$SSNIP	\$1,000	Calculated			
		Calculated	Incremental net profits	<u>\$30,000,000</u>	

- Incremental net profits are positive, so blue cars are a relevant market under the hypothetical monopolist test
- This is a “brute force” accounting implementation of a uniform SSNIP test

HMT: Merger Guidelines Algorithm¹

1. Start with the product of a merging firm as the starting candidate market.
 - In practice (and in the courts), the starting market may include multiple products selected for reasons outside the HMT test (such as industry recognition)
2. Ask whether a hypothetical monopolist of the candidate market could profitably increase price by a SSNIP. If so, then that candidate market satisfies the HMT. If not, go to Step 3.
3. Expand the market to include the next closest substitute to the products in the prior candidate market and repeat Step 2.



1. Start with candidate market x. Apply HMT.
If HMT is satisfied, this is the relevant market
If HMT fails, expand market to y
2. Apply HMT to new candidate market
If HMT is satisfied, this is the relevant market
If HMT fails, expand market to z
3. Apply HMT to new candidate market
If HMT is satisfied, this is the relevant market
If HMT fails, expand market . . .

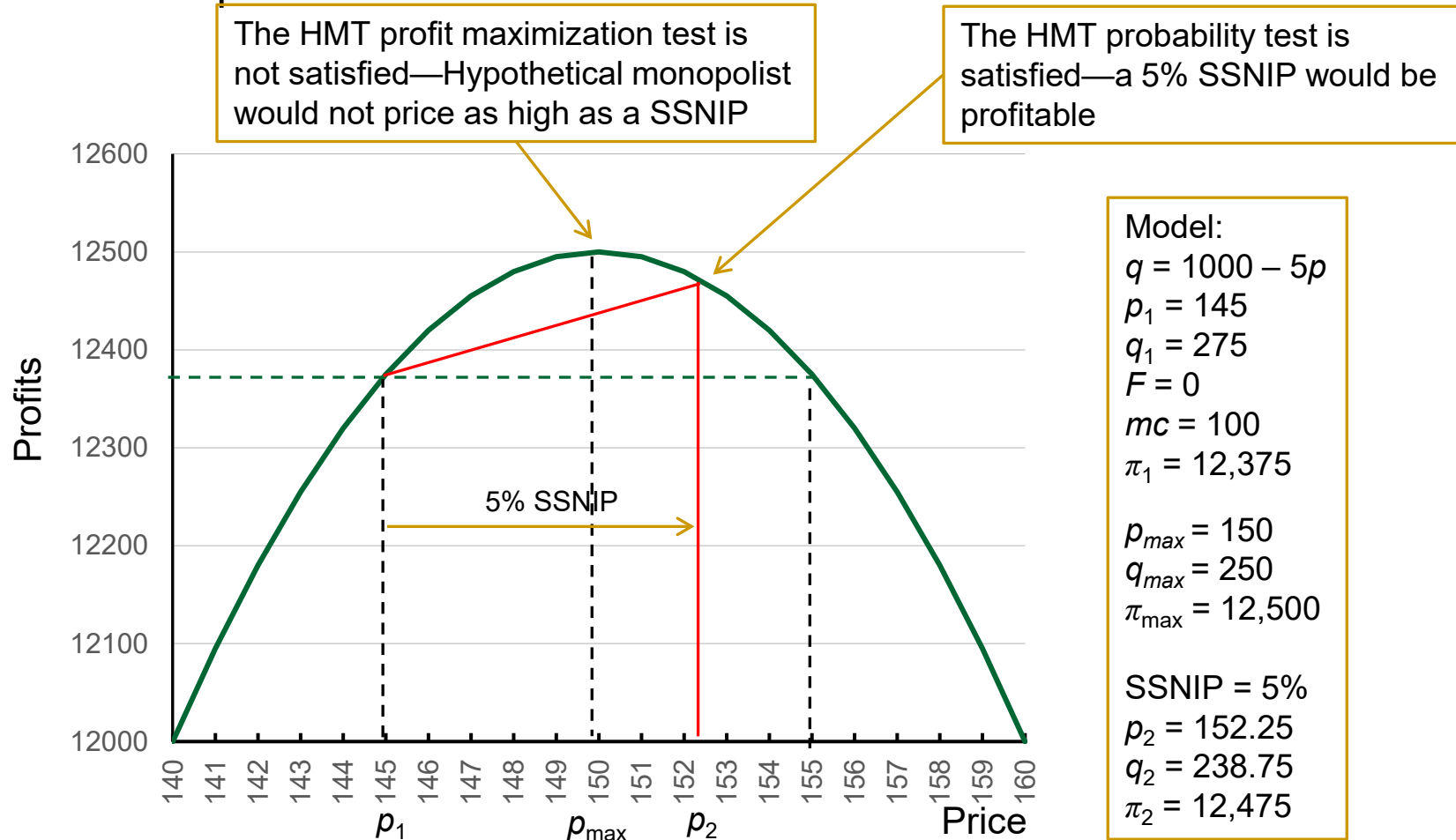
¹ 1992 Horizontal Merger Guidelines § 1.11.

HMT: Some questions

1. Should the test be whether the SSNIP is profitable for the hypothetical monopolist (the *profitability* or *breakeven test*) or whether the hypothetical monopolist's profit-maximizing price is equal to or greater than the SSNIP (the *profit-maximization test*)?
 - The practice under the 1982 and 1992 Merger Guidelines in the agency and the courts was to use the profitability test
 - The profitability test is sometimes called the *breakeven test*
 - Moreover, notwithstanding that change in verb from “could” to “would” in the 1992 Merger Guidelines, the agencies did not change from a profitability test to a profit-maximization test either in their investigations or in their briefs in court
 - After the 2010 Merger Guidelines were released, the DOJ and FTC chief economists began to emphasize the profitability test as the proper one in economic analysis as well as the one prescribed by the language of the Guidelines
 - Practice in the courts
 - As the courts were adopting the hypothetical monopolist test in the 1980s and early 1990s, the 1982 and 1992 guidelines were in effect
 - As a result, the agencies urged the courts to adopt, and the courts did adopt in fact, the probability version of the hypothetical monopolist test
 - Today, the profitability test remains the judicial test in most courts

HMT: Some questions

- *Example:* HMT profitability and profit maximization tests in a close-to-monopolized market



HMT: Some questions

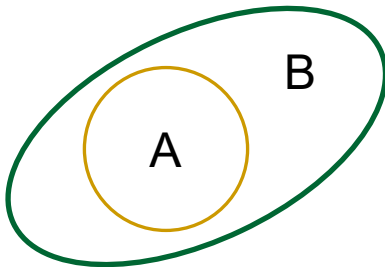
- Testing for profit-maximization
 - *Proposition:* Given the symmetry in the profit curve when demand is linear, a candidate market will satisfy the profit-maximization test for a SSNIP of δ if the candidate market satisfies the profitability test of 2δ
- Profitability v. profit-maximization: Does it matter?
 - *Not really:* The profit-maximization test will fail only if the prevailing market price is within 5 percent of the monopolist's profit-maximizing price
 - Empirically, this should occur only rarely

In this course, the default is the profitability version of the HMT although we will see the profit-maximization in some case studies

HMT: Some questions

2. Uniform or selective SSNIP

- Should the hypothetical monopolist increase the prices of all products in the relevant market by the same percentage SSNIP or should the monopolist be allowed to selectively increase the prices of one or more products in the relevant market?
 - *The 1982 Merger Guidelines*: Required a uniform SSNIP
 - *The 1992 Merger Guidelines*: Allowed a selective SSNIP; the practice was to use a selective SSNIP when the product in question was already selectively priced under prevailing market conditions
 - *The 2010 Merger Guidelines*: Allowed a selective SSNIP; the practice is to use a selective SSNIP when the product in question was already *or* could be selectively priced
- *Proposition*: If a candidate market satisfies the HMT, then any superset of that market will satisfy the HMT
 - Use selective pricing and keep the added products at their original price



If A satisfies the HMT, then $A \cup B$ satisfies the HMT (just keep the B products at their original prices)

HMT: Some questions

3. Should the relevant market identified by the HMT be the smallest market that satisfies the test or should any (reasonable) candidate market that satisfies the test be a relevant market?
 - The 1982 and 1992 Merger Guidelines imposed a “smallest market” requirement
 - In principle, this makes the relevant market unique
 - The 2010 Merger Guidelines rejected the smallest market requirement
 - Also rejects unique relevant markets and allows multiple relevant markets for the same pair of overlapping merger products
 - The courts have never applied the HMT strictly algorithmically and have accepted larger relevant markets that also satisfied the *Brown Shoe* tests
 - We see this in H&R Block/TaxAct
 - Courts, however, do sometimes state that they do apply the smallest market principle
 - NB: When using a selective or one-product SSNIP, any superset of a relevant market will satisfy the HMT profitability test

HMT: Some questions

4. Is passing the HMT a necessary or a necessary and sufficient condition for a relevant market?
- ❑ Originally, the HMT was widely considered by the agencies and the bar as a necessary and sufficient condition
 - ❑ But courts did not accept the HMT as a sufficient test when the product grouping did not comport with the “commercial realities” of a market—typically when:
 - Close substitutes were excluded, *or*
 - The industry did not recognize the product grouping as a market
 - ❑ The 2010 Horizontal Merger Guidelines implicitly weakened the HMT to more of a necessary test when they eliminated the smallest market requirement:

The hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects. Because the relative competitive significance of more distant substitutes is apt to be overstated by their share of sales, when the Agencies rely on market shares and concentration, they usually do so in the smallest relevant market satisfying the hypothetical monopolist test.¹

¹ 1992 Horizontal Merger Guidelines § 4.11.

Market Definition

Part 2: Qualitative evidence

Evidence

■ Types of probative evidence

1. Qualitative evidence probative of consumer substitutability: cross-elasticity of demand, diversion, reasonable interchangeability of use
 - *Brown Shoe* “practical indicia”-type evidence
2. Quantitative evidence implementing the Hypothetical Monopolist Test (HMT)

■ Sources of evidence

1. Business documents of the merging parties and other companies
2. Testimony of fact witnesses
3. Analysis by expert economists

■ Some key questions

1. Which products does the company regard as its primary competitors when setting prices, deciding on products attributes or improvements, or considering strategy?
2. Which products does the company track for prices, product offering, product attributes?

We are going to look first at the qualitative evidence in H&R Block

Evidence: DDIY belong in the market

- When setting prices and product attributes, the merging parties—
 - Look almost exclusively at other DDIY firms and rarely look at other firms
 - Rarely consider loss of DDIY customers to other tax preparation methods
- TaxACT CIM identified HRB and TurboTax as the main competitors
 - A “CIM” is a *Confidential Information Memorandum*—a sales document prepared by the investment bankers designed to attract interest at the highest price
 - Can be a serious problem for the antitrust defense if not carefully written (as here)
- TaxACT strategy documents: “Freemium” strategy designed to attract customers from other DDIY competitors (especially HRB and TurboTax)

Evidence: Other methods do not belong

1. Consumer experience is very different from DDIY experience

- ❑ Different technology
- ❑ Different prices
- ❑ Different convenience levels
- ❑ Different time investments
- ❑ Different type of interaction by the customer with the product

2. DDIY prices differ significantly from assisted preparation

- ❑ TurboTax: \$55
 - ❑ HRB: \$25 (average)
 - ❑ TaxACT: Freemium
 - ❑ Assisted: \$150-\$200 (not within SSNIP)
- DDIY average price: \$44.13

But note that the court ignored the significant percentage differences in prices of products within the DDIY candidate market

3. No detectable switching based on small changes in relative price

- ❑ *Testimony*: Switching that does occur appears the result of changes in tax condition
 - Not price driven
- ❑ HRB and third-party executives testified that they do not believe that their DDIY compete closely with manual or assisted

Conclusion

Qualitative evidence indicates that DDIY tax software products are the relevant product market

Market Definition

Part 3: Quantitative evidence

Experts

■ DOJ: Frederick R. Warren-Boulton

- Ph.D in economics (Princeton University)
- Private consultant (Ankura)
- Formerly ATD chief economist
- Expert witness in multiple cases



■ Merging parties: Christine Meyer

- Ph.D in economics (MIT)
- Private consultant (NERA)
- First merger case as a testifying expert



Federal Rules of Evidence

■ Rule 602: General rule

Called a *percipient witness* or a *fact witness*

"A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has *personal knowledge* of the matter."

■ Rule 702: Exception for expert opinion evidence¹

Personal qualifications:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify *in the form of an opinion* or otherwise if:

¹ Rule 702 was amended in 2000 in response to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and to the many cases applying *Daubert*, including *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999). In *Daubert* the Court charged trial judges with the responsibility of acting as gatekeepers to exclude unreliable expert testimony. In *Kumho*, the Court clarified that this gatekeeper function applies to all expert testimony, not just testimony based on science.

Federal Rules of Evidence

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A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has *personal knowledge* of the matter.

■ Rule 702: Exception for expert opinion evidence

Personal qualifications:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify *in the form of an opinion* or otherwise if:

Relevance and helpfulness:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

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Sufficiency of data:

(b) the testimony is based on sufficient facts or data;

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Reliability of methods:

(c) the testimony is the product of reliable principles and methods; and

Federal Rules of Evidence

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Reliability of methods:

(c) the testimony is the product of reliable principles and methods; and

Reliability of application:

(d) the expert has reliably applied the principles and methods to the facts of the case.

Federal Rules of Civil Procedure

- Discovery: Rule 26(a)(2)—Disclosure of expert testimony: Requires—
 1. Disclosure of the identity of any witness who may be used at trial to present expert opinion testimony
 2. A written report prepared and signed by each testifying expert containing—
 - a. a complete statement of all opinions the witness will express and the basis and reasons for them;
 - b. the facts or data considered by the witness in forming them;
 - c. any exhibits that will be used to summarize or support them;
 - d. the witness's qualifications, including a list of all publications authored in the previous 10 years;
 - e. a list of all other cases in which, during the previous 4 years, the witness testified as an expert at trial or by deposition; *and*
 - f. a statement of the compensation to be paid for the study and testimony in the case

Federal Rules of Civil Procedure

- Departures from the expert report
 - New evidence not contained within the expert's report or testimony that significantly departs from the report is objectionable and the court may stricken from the record
- Observations
 - Rule 26(a)(2) expert reports are discovery products and are not given to the court as a matter of course
 - But can be submitted as a declaration in support of a preliminary injunction
 - Frequently, the expert submits a new declaration and not the entire expert report
 - Experts typically testify at trial
 - But courts can require written reports or written direct testimony
 - So you sometimes see expert reports in the record (although they are almost always under seal)

Federal Rules of Civil Procedure

■ Usual procedure

- Expert provides Rule 26(a)(2) report to opposing party
 - Usually both sides have experts—Depending on the case management order (CMO), initial reports may be exchanged simultaneously or provided sequentially (with the plaintiff going first with its report)
- Opposing side takes the expert's deposition
- Opposing expert submits rebuttal report
- Expert submits a reply report responding to criticisms
 - NB: The reply report cannot introduce “new” analysis or opinions
 - Query: What does “new” mean in this context?
 - A frequently litigated issue

■ Challenges to the admissibility of expert testimony

- Based on the expert reports and deposition, the opposing side may file a pretrial motion in limine to exclude from trial some or all of the expert's analysis and opinions for failure to satisfy the requirement of Rule 702
 - This is called a *Daubert* motion
- Usually decided on the papers, but the court can hear live testimony and question the expert at a *Daubert* hearing
 - Daubert hearings are common in jury trials and reasonably rare in bench trials

DOJ's expert evidence

- Warren-Boulton conclusions: The relevant product market is DDIY
 1. A hypothetical monopolist of DDIY products could profitably impose a uniform SSNIP profitably for all DDIY products, *and*
 2. Consumer substitution to assisted methods or pen-and-paper would be insufficient to defeat the SSNIP
- Organization of testimony
 1. Results of review of regular course of business documents
 2. Hypothetical monopolist test
 3. Merger simulation

DOJ's expert evidence

1. Started with DDIY as the initial provisional market

- Functionally similar from user perspective
 - Fundamentally similar service
 - Similar user experience: User sits at computer and interacts with the DDIY software, which prompts user for information
- Review of defendants' documents indicated they viewed DDIY products in same market
- *Court*: Agreed that this is an appropriate starting place

Note that Warren-Boulton was not applying any formal economic tools here. He was simply looking at the practice as evidenced by what he reviewed in the documents and the (deposition) testimony. Still, he opined as an economist that economists look at these things when determining the starting point of the market definition analysis. Then the exercise becomes what else—if anything—to include in the market.

DOJ's expert evidence

2. Ruled out manual preparation (in the initial provisional market)

- Some facts
 - “Gradual migration of customers to DDIY from more traditional methods like pen-and-paper”
 - DDIY growing in share while manual declining
- But—
 - No correlation of switching to manual with changes in yearly average DDIY prices
 - IRS data indicates that switching to manual from DDIY appeared to be driven by decreases in tax return complexity, not relative prices
 - That is, a shift of the taxpayer's demand curve, *not* a shift along the demand curve

DOJ's expert evidence

3. Ruled out assisted preparation (in the initial provisional market)
- Growth in DDIY not at expense of assisted (from documents and testimony)
 - HRB internal studies and IRS data indicate that switching from DDIY to assisted is correlated to increases in tax complexity
 - Using IRS switching data from 2004-2009, increase in relative price of assisted was not associated with—
 - Decreases in relative share of assisted, or
 - Increases in relative share of DDIY

Remember the relationships: If products are substitutes, then an increase in the relevant price of one product will—

- 1. Decrease the demand for that product, and*
- 2. Increase the demand of the other product*

DOJ's expert evidence

- Used two quantitative tests to confirm DDIY as the relevant market
 1. *A critical loss implementation* of the hypothetical monopolist test
 2. *Merger simulation*

Implementations of the Hypothetical Monopolist Test: Critical Loss

Critical loss

■ The basic idea

- When demand is linear, the profit curve as a function of price is a parabola

Model:

$$q = 1000 - 5p$$

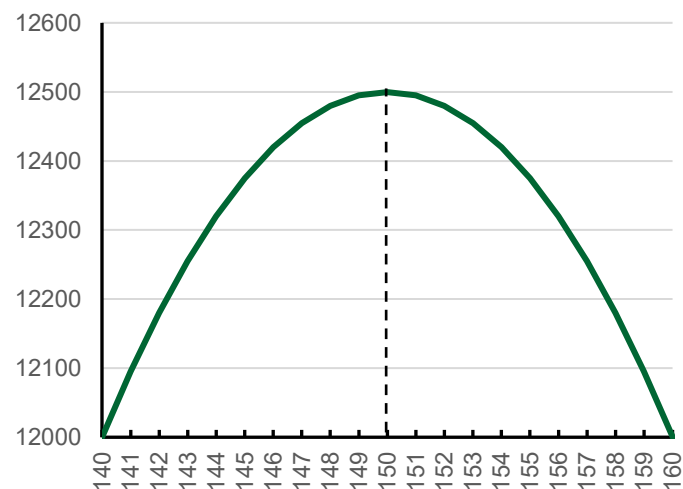
$$F = 0$$

$$p_{\max} = 150$$

$$q_{\max} = 250$$

$$\pi_{\max} = 12,500$$

Profits as a Function of Price

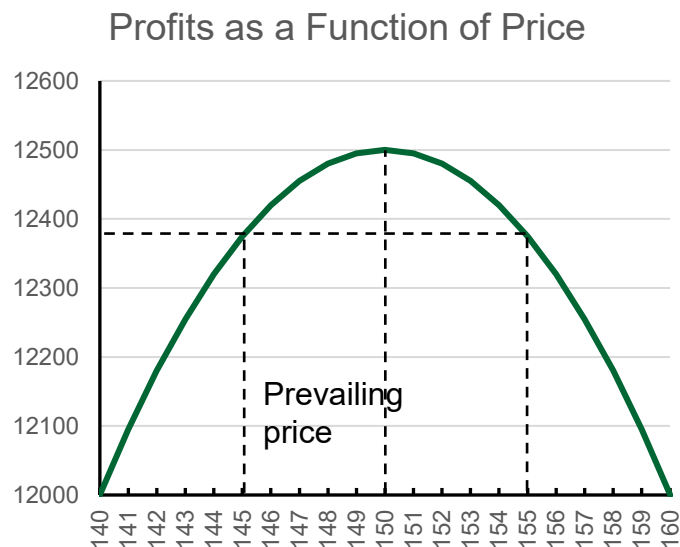


Critical loss

- Say the prevailing price is 145
- Then a price of 155 would yield the same profits

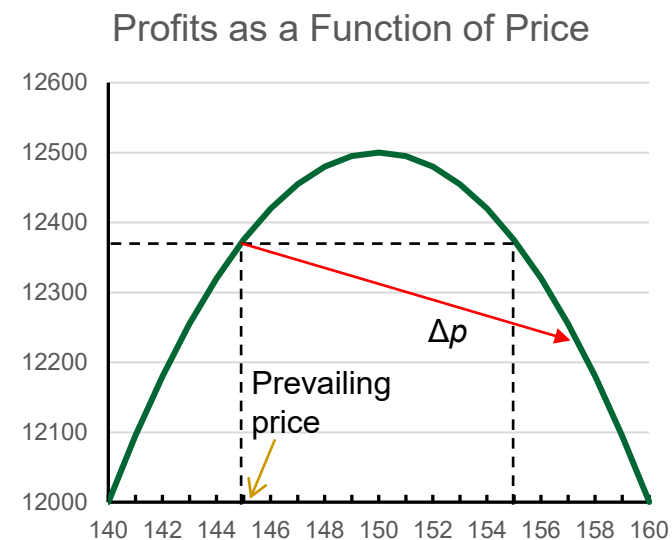
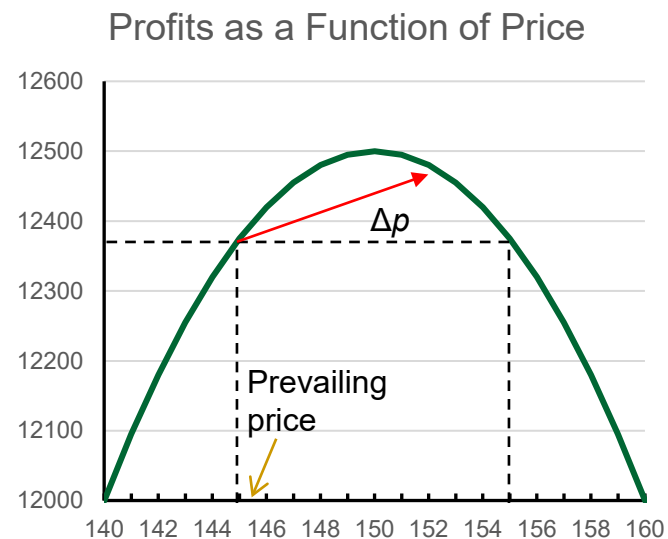
p	q	π
145	275	12,375
155	225	12,375

- Any price strictly between 145 and 155 would yield higher profits
- Note that 150 is the profit-maximizing price



Critical loss

- Δp is profitable in the first graph and unprofitable in the second graph



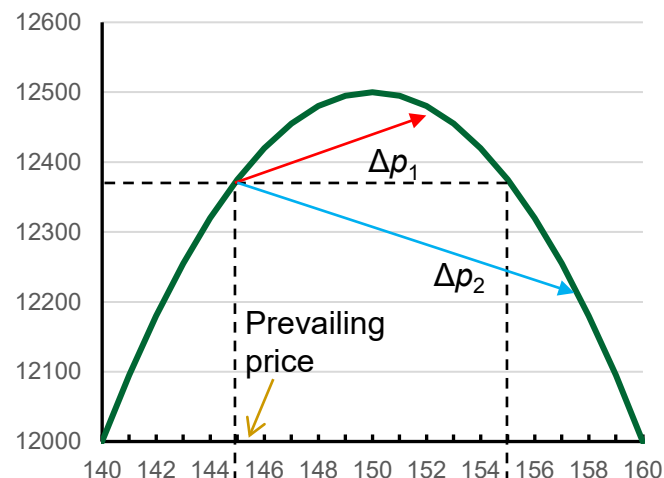
Critical loss

- Implementing the hypothetical monopolist test
 - The *critical loss* for Δp will be the maximum quantity Δq_{cl} the hypothetical monopolist could lose and still make at least as much in profit as it did before the SSNIP was implemented
 - We can associate an actual loss Δq with a price increase of Δp

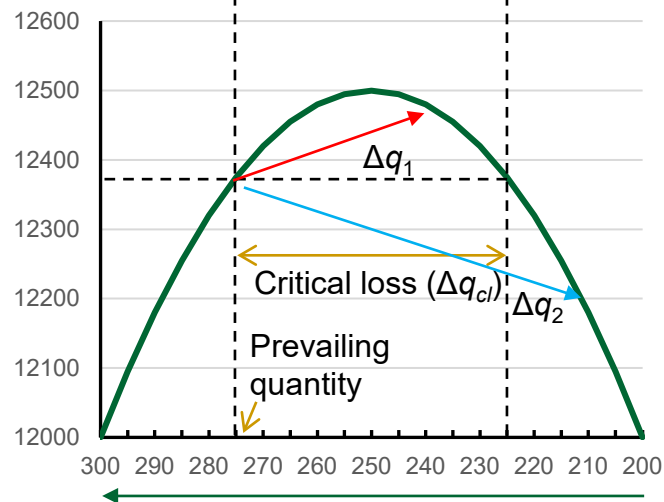
Whether the price increase is profitable will depend on whether the associated quantity decrease is less than the critical loss, that is whether $\Delta q \leq \Delta q_{cl}$

- This is called the *critical loss test*
 - Δp_1 is profitable because $\Delta q_1 \leq \Delta q_{cl}$
 - Δp_2 is unprofitable because $\Delta q_2 > \Delta q_{cl}$

Profits as a Function of Price



Profits as a Function of Quantity



Critical loss

- The *critical loss rule*:

*If actual loss is less than the critical loss,
the candidate market satisfies the HMT*

- The idea

- When actual loss is less than critical loss, this means that for a given SSNIP the hypothetical monopolist is able—
 - to capture enough incremental profits on the margin increase on its inframarginal sales
 - to offset the incremental profit decrease on the loss of the marginal sales

- A caution

- Actual loss and critical loss are functions of the magnitude of the SSNIP
- A hypothetical monopolist that satisfies the HMT at a 5% SSNIP may fail the HMT for a 10% SSNIP

Critical loss

■ A little algebra

- The critical loss for Δp will be the maximum quantity Δq_{cl} the hypothetical monopolist could lose and still make at least as much in profit as it did before the SSNIP was implemented:

$$\begin{array}{ccc}
 \text{Post-price increase profits} & & \text{Pre-price increase profits} \\
 (p + \Delta p - c)(q - \Delta q_{cl}) & = & (p - c)q \\
 \underbrace{\underbrace{p + \Delta p}_{p_2} - c}_{m_2} \underbrace{(q - \Delta q_{cl})}_{q_2} & & \underbrace{(p - c)}_{m_1} q
 \end{array}$$

Breakeven condition with constant marginal costs

- Rearranging this equality, we can also express this condition as an equality of the gross gain in profits on retained sales and the gross loss in profits from lost sales:

$$\begin{array}{ccc}
 \text{Gain on retained sales} & & \text{Loss of margin on lost sales} \\
 \Delta p(q - \Delta q_{cl}) & = & (p - c)\Delta q_{cl}
 \end{array}$$

Note: Critical loss is a function of the starting point q as well as p , Δp , and c

Critical loss

- A little more algebra: Three formulas for critical loss
 1. Solving for Δq_{cl} provides a formula for the *critical loss in units*:

1. Unit critical unit loss formula:

$$(CL =) \Delta q_{cl} = \frac{q\Delta p}{(p + \Delta p) - c}$$

In a HMT, Δp is the \$SSNIP

- Requires—
 - The same price (and hence the same Δp) for all products in the candidate market
 - The same dollar margin for all products in the candidate market

Critical loss

- A little more algebra: Three formulas for critical loss

2. Divide Equation 1 by q to obtain *percentage critical loss*:

$$\begin{aligned} (\% \Delta q_{cl} \equiv) \frac{\Delta q_{cl}}{q} &= \frac{\Delta p}{(p + \Delta p) - c} = \frac{\frac{\Delta p}{p}}{\frac{\Delta p}{p} + \frac{p - c}{p}} \\ &= \frac{\delta}{\delta + m} \end{aligned}$$

2. Percentage critical loss formula:

where

δ is the percentage price increase: $\delta = \frac{\Delta p}{p}$

In a HMT, δ is the %SSNIP

m is the percentage gross margin: $m = \frac{p - c}{p}$

- Requires a constant percentage margin m for all products in the candidate market

Critical loss

■ A little more algebra: Three formulas for critical loss

3. We can also define the *critical elasticity* ε_{cl} as the maximum elasticity that will profitably support a price increase of δ :

Definition of own-elasticity:
$$|\varepsilon_{cl}| = \frac{\frac{\Delta q_{cl}}{q}}{\frac{\Delta p}{p}} = \frac{\Delta q_{cl}}{q} \frac{1}{\delta} \Rightarrow \frac{\Delta q_{cl}}{q} = \delta |\varepsilon_{cl}|$$

NB: By convention, Δq_{cl} is a *positive* number. To make the signs work, we must use the absolute value of the elasticity. *Always watch for the sign of Δq in any equation.*

Percentage critical loss formula:
$$\frac{\Delta q_{cl}}{q} = \frac{\delta}{\delta + m} \Rightarrow \delta |\varepsilon_{cl}| \cong \frac{\delta}{\delta + m},$$

Cancelling the δ s:
$$|\varepsilon_{cl}| \cong \frac{1}{\delta + m}$$

3. Critical elasticity formula

- Accordingly, when the actual own-elasticity of demand ε is less than the critical elasticity ε_{cl} (i.e., ε is more *inelastic* than ε_{cl} or equivalently $|\varepsilon| < |\varepsilon_{cl}|$), then for a small enough %SSNIP the price increase will be profitable

- We can express this as:

$$|\varepsilon| < \frac{1}{\delta + m}.$$

Critical loss and market definition

■ The basic idea

- Recall that under the hypothetical monopolist test, a candidate market is a relevant market if a hypothetical monopolist could profitably raise prices in the candidate market by a SSNIP
- So for any candidate market with prevailing aggregate output q and price p and a SSNIP Δp —
 - if the associated change in output Δq is less than the critical loss Δq_{cl} ,
 - then a hypothetical monopolist could profitably raise price by the SSNIP
 - and the candidate market is a relevant market (more, more technically, satisfies the HMT)

Homework problem 1

Products A and B are being tested as a candidate market. The market price for each unit of either product is \$300, each type of product has a constant incremental cost of \$160 per unit and aggregate sales of 1000 units. When the price for both products is increased by \$15, each firm loses 100 units to products other than A and B. What is the critical loss for the candidate market of products A and B? Do A and B constitute a relevant market under the hypothetical monopolist test using critical loss analysis and SSNIP of 5%?

You are given the actual unit loss, so think the unit critical loss test

■ “Brute force” method

□ Step 1: Summarize the variables

- $p = 300$ $Q = 1000 + 1000 = 2000$
- $c = 160$ $\Delta Q = -100 + -100 = -200$
- $\$SSNIP = 15$

□ Step 2: Set up and solve the breakeven condition:

$$pq - cq = (p + \Delta p)(q - \Delta q_{cl}) - c(q - \Delta q_{cl})$$

- Rearranging:

$$(p - c)q = (p + \Delta p - c)(q - \Delta q_{cl})$$

Profits = \$margin times quantity

- Substituting parameters:

$$(300 - 160)2000 = (300 + 15 - 160)(2000 - \Delta q_{cl})$$

Homework problem 1

■ “Brute force” method (con’t)

- Step 2: Set up and solve the breakeven condition for ΔQ_{cl} (con’t)

The screenshot shows the MathPapa Algebra Calculator interface. At the top, there's a navigation bar with "MathPapa" and links for "ALGEBRA CALCULATOR", "PRACTICE", and "LESSONS". Below this, the title "Algebra Calculator" is displayed. A text input field contains the equation $160 \cdot 2000 = (300 + 15 - 160) \cdot (2000 - x)$. To the right of the input field is a yellow button labeled "CALCULATE IT!". Below the input field are three tabs: "Solve" (selected), "Lesson", and "Practice". A dropdown menu shows "Solve". Below the tabs, the text "Let's solve your equation step-by-step." is followed by the equation $(300 - 160)(2000) = (300 + 15 - 160)(2000 - x)$. A blue button labeled "Show Step-By-Step" is below the equation. The "Answer:" section shows the solution $x = \frac{6000}{31} = 193.55$.

Neither precision nor accuracy is a hallmark of market definition. Although actual loss is greater critical than critical loss, the difference is so small that it is unlikely a court would reject A and B as a relevant market if the qualitative evidence had convinced the judge that A and B are a proper relevant market

- Step 3: Compare actual loss to unit critical loss
 - Actual loss: $\Delta Q = 100 + 100 = 200$ units
 - Unit critical loss $\Delta Q_{cl} = 193.55$
- Answer: Since $\Delta Q > \Delta Q_{cl}$, Products A and B are technically NOT a relevant product market under the Merger Guidelines

Homework problem 1

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■ Unit critical loss formula

□ Step 1: Summarize variables

- $p = 300$ $Q = 1000 + 1000 = 2000$
- $c = 160$ $\Delta Q = 100 + 100 = 200$
- $\$SSNIP = 15$

□ Step 2: Apply the *unit critical loss formula* find unit critical loss

$$\Delta Q_{cl} = \frac{Q\Delta p}{(p + \Delta p) - c} = \frac{2000 * 15}{(300 + 15) - 160} = 193.55$$

□ Step 3: Compare actual loss to unit critical loss

- Actual loss: $\Delta Q = 100 + 100 = 200$ units
- Unit critical loss $\Delta Q_{cl} = 193.55$

□ *Answer:* Since $\Delta Q > \Delta Q_{cl}$, Products A and B are technically NOT a relevant product market under the Merger Guidelines

Critical loss and market definition: Example 2

Products A and B are being tested as a candidate market. Each sells for \$100, has an incremental cost of \$60, and sells 1200 units. When the price for both products is increased by \$5, each firm loses 100 units to outside the market. Do A and B constitute a relevant market under the 2010 Guidelines?

Given actual loss, so think unit critical loss

Critical loss and market definition: Example 2

Products A and B are being tested as a candidate market. Each sells for \$100, has an incremental cost of \$60, and sells 1200 units. When the price for both products is increased by \$5, each firm loses 100 units to outside the market. Do A and B constitute a relevant market under the 2010 Guidelines?

Given actual loss, so think unit critical loss

Parameters		
Price	p	100
Cost	c	60
Gross margin	m	40
Market output	Q	2400
SSNIP	Δp	5
Customer loss	ΔQ	-200

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Parameters		
Price	p	100
Cost	c	60
Gross margin	m	40
Market output	Q	2400
SSNIP	Δp	5
Customer loss	ΔQ	-200

Critical loss	
$\Delta q^* = \frac{q\Delta p}{(p + \Delta p) - c}$	
q Δp	12000
(p+ Δp)-c	45
CL	266.6667

Unit critical loss formula

Actual loss (200) is less than the critical loss (266.67), so A and B are a relevant market

Critical loss and market definition: Example 2

Products A and B are being tested as a candidate market. Each sells for \$100, has an incremental cost of \$60, and sells 1200 units. When the price for both products is increased by \$5, each firm loses 100 units to outside the market. Do A and B constitute a relevant market under the 2010 Guidelines?

Given actual loss, so think unit critical loss

Parameters			"Brute force" profit calculations		Critical loss	
Price	p	100	Gain = (Q+ΔQ)Δp		$\Delta q^* = \frac{q\Delta p}{(p + \Delta p) - c}$	
Cost	c	60	Q + ΔQ	2200		
Gross margin	m	40	Δp	5		
Market output	Q	2400	Gain	11000		
SSNIP	Δp	5	Loss = mΔQ		$\frac{q\Delta p}{(p + \Delta p) - c}$	
Customer loss	ΔQ	-200	ΔQ	-200		
			m	40		
			Loss	-8000		
			Net	3000	CL 266.6667	

From the breakeven condition (see earlier slide)

Actual loss (200) is less than the critical loss (266.67), so A and B are a relevant market

Brute force profit calculations confirmation: Since the gain exceeds the loss, a hypothetical monopolist of A and B could profitably raise price by 5% and so A and B are a relevant market

Critical loss and market definition: Example 3

Premium cupcakes sell for \$1.50 apiece and cost \$0.90 to make. At this price, producers collectively sell 10,000 premium cupcakes. When the price for all premium cupcakes is increased by 5%, 15% of the customers switch to regular cupcakes. Do premium cupcakes constitute a relevant market under the 2010 Guidelines?

You are given the percentage loss, so think percentage critical loss

- Step 1: Summarize the variables

- $p = 1.50$ %SSNIP = 5%
- $c = 0.90$ Q = 10,000
- $m = \frac{1.50 - 0.90}{1.50} = 40\%$ %ΔQ = 15%

- Step 2: Calculate the percentage critical loss:

$$(\%CL) = \frac{\Delta q_{cl}}{q} = \frac{\delta}{\delta + m} = \frac{5\%}{5\% + 40\%} = 11.11\%$$

- Step 3: Compare percentage actual loss to percentage critical loss

- Percentage actual loss = 15%
- Percentage critical loss = 11.11%

- *Answer:* Since $\% \Delta Q > \% \Delta Q_{cl}$, premium cupcakes are NOT a relevant product market

Homework problem 2

In *FTC v. Occidental Petroleum Corp.*, No. 86-900, 1986 WL 952 (D.D.C. Apr. 29, 1986), the FTC challenged the pending acquisition by Occidental Petroleum, a major producer of polyvinyl chloride ("PVC"), of Tenneco's PVC business. Both companies produced PVC in plants in the United States. The parties agreed that the relevant product markets were suspension homopolymer PVC and dispersion PVC, and the PI proceeding focused largely on the relevant geographic market. The FTC alleged that the relevant geographic market was the United States for both types of products; the merging parties argued that the relevant geographic market was worldwide. In the Section 13(b) proceeding for a preliminary injunction, the evidence showed that if the price of all suspension homopolymer PVC produced in the United States was increased by 5%, U.S. customers would divert about 17% of their purchases to imports from foreign suppliers (who were ready to serve these customers). The evidence also showed that that if the price of all dispersion PVC produced in the United States was increased by 5%, U.S. customers would divert about 12% of their purchases to imports from foreign suppliers (again, who were ready to serve these customers). The evidence in the hearing also showed that the percentage gross margins for homopolymer PVC and dispersion PVC were 28% and 45%, respectively. Was the FTC correct that the relevant geographic market was the United States using the hypothetical monopolist test and a SSNIP of 5%?

You are given the percentage loss, so think percentage critical loss

Homework problem 2

■ Use percentage critical loss method

□ Step 1: Summarize the variables

Suspension PVC

- %SSNIP = 5%
- %m = 28%
- %ΔQ = 17%

Dispersion PVC

- %SSNIP = 5%
- %m = 45%
- %ΔQ = 12%

□ Step 2: Calculate the percentage critical loss:

□
$$\% \Delta q_{cl-suspension\ PVC} = \frac{\delta}{\delta + m} = \frac{5\%}{5\% + 28\%} = 15.15\%$$

$$\% \Delta q_{cl-dispersion\ PVC} = \frac{\delta}{\delta + m} = \frac{5\%}{5\% + 45\%} = 10.00\%$$

□ Step 3: Compare percentage actual loss to percentage critical loss:

- Suspension PVC: 17% actual 15.15% percentage critical loss
- Dispersion PVC: 12% actual 10.00% percentage critical loss

- **Answer:** The percentage actual loss is greater than the percentage critical loss for both product types, so neither product type technically is its own relevant product market

Homework problem 3

Premium ice cream sells at \$4.00/pint and has a constant marginal cost of \$2.25/pint. The own-elasticity of aggregate demand for premium ice cream is -1.9 , with almost all diversion going to regular ice cream. Two premium ice cream manufacturers proposed to merge. Is premium ice cream a relevant product market under the hypothetical monopolist test under a 5% SSNIP, or should the market be expanded to include regular ice cream?

You are given an actual elasticity, so think critical elasticity

- Step 1: Summarize variables

- $p = 4.00$

%SSNIP = 5%

- $c = 2.25$

$$\varepsilon = -1.9$$

- $$\%m = \frac{4.00 - 2.25}{4.00} = 43.75\%$$

- Step 2: Calculate the absolute value of the critical elasticity:

$$|\varepsilon_{cl}| = \frac{1}{\delta + m} = \frac{1}{0.05 + 0.4375} = 2.05$$

In calculating critical elasticity, be sure to convert the percentages into decimal numbers!

- Step 3: Compare the actual elasticity with the critical elasticity:

- Actual elasticity (absolute value) = 1.9

- Critical elasticity (absolute value) = 2.05

- *Answer:* Since $|\varepsilon| < |\varepsilon_{cl}|$, premium ice cream is a relevant market (inelastic enough)

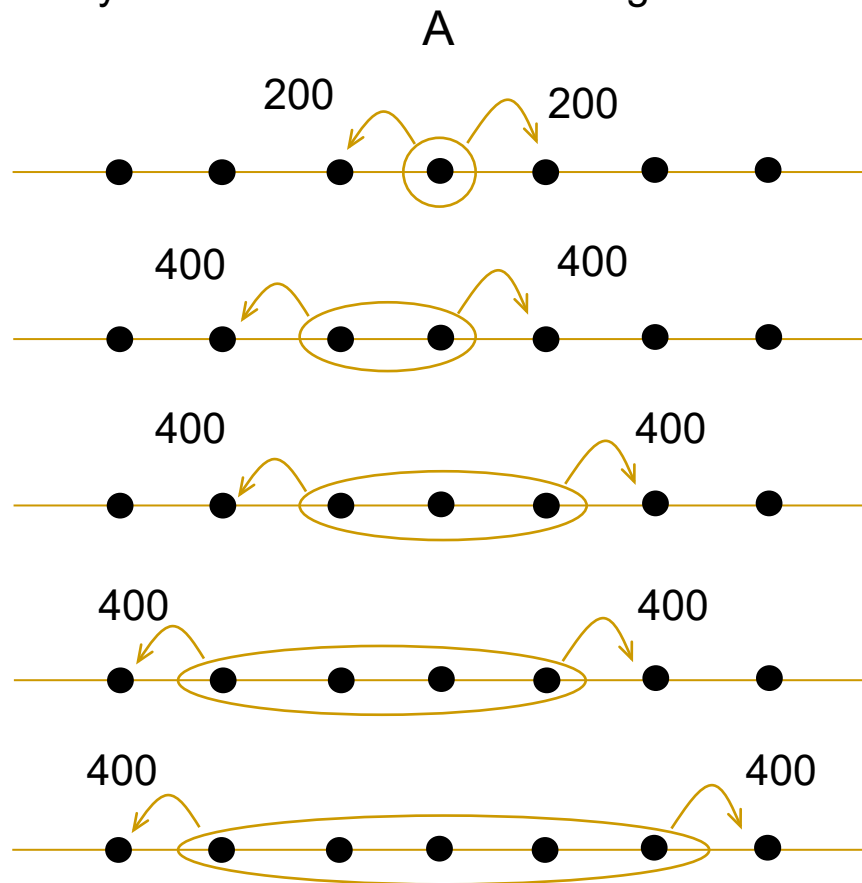
Critical loss and market definition: Example 4

Assume that there is an identical gas station every mile on a straight road. Each gas station charges \$3.25 per gallon, has an incremental cost of \$2.50, and sells 1000 gallons. When the price at a station is increased by 5% (holding the price at all other gas stations constant), the station loses customers who in the aggregate buy 400 gallons. No customer will travel more than one mile, however, to avoid a 5% price increase. For a given station A and assuming a SSNIP of 5%, what is the relevant market?

Critical loss and market definition: Example 4

■ Example 4: Gas stations on a road

- Step 0: Make sure you understand the switching behavior!



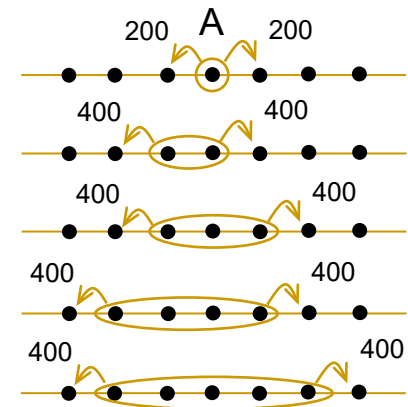
Critical loss and market definition: Example 4

Assume that there is an identical gas station every mile on a straight road. Each gas station charges \$3.25 per gallon, has an incremental cost of \$2.50, and sells 1000 gallons. When the price at a station is increased by 5% (holding the price at all other gas stations constant), the station loses customers who in the aggregate buy 400 gallons. No customer will travel more than one mile, however, to avoid a 5% price increase. For a given station A and assuming a SSNIP of 5%, what is the relevant market?

This is complicated, so think brute force

- Step 1: Summarize the variables
 - $p = 3.25$ %SSNIP = 5%
 - $c = 2.50$ \$SSNIP = $0.05 * 3.25$
 - $\$m = 3.25 - 2.50 = 0.75$ = 0.1625
 - Customers/station = 1000
 - Customer loss per station = 400
- Step 2: Calculate net profit gain as the market expands

Stations in the market	Q	ΔQ	Gain	Loss	Net
1	1000	400	97.50	300.00	-202.50
2	2000	800	195.00	600.00	-405.00
3	3000	800	357.50	600.00	-242.50
4	4000	800	520.00	600.00	-80.00
5	5000	800	682.50	600.00	82.50👉



Five stations, with Station A in the middle, is the relevant geographic market

Critical loss and market definition

■ Estimating actual loss (Δq)

- First-order approximation of the percentage actual loss for any demand curve:

Percentage actual loss formula

$$\frac{\frac{\Delta q}{q}}{\frac{\Delta p}{p}} \equiv \varepsilon \Rightarrow \frac{\Delta q}{q} \approx \frac{\Delta p}{p} \varepsilon = \delta \varepsilon,$$

where ε is the residual own-elasticity of demand for the candidate market (i.e., of the hypothetical monopolist)

that is, the percentage actual loss is approximately equal to the percentage price change times the own-elasticity of demand

- This formula is exact when demand is linear
- First-order approximation of the actual unit loss:

$$\frac{\Delta q}{q} \approx \delta \varepsilon \Rightarrow \Delta q \approx q \delta \varepsilon.$$

Unit actual loss formula

- This formula is exact when demand is linear

Critical loss: Differentiated margins

- Multiple margins in homogeneous markets
 - The critical loss formulas in the earlier slides require some uniformity across all products in the candidate market
 - In many homogeneous candidate markets, however, the percentage margins will differ among products because of differences between producers in their marginal costs
 - Production technologies may differ among firms resulting in different marginal costs and hence different margins even when all products are homogeneous and sell at the same price
 - There are two modifications of the critical loss formulas to handle multiple margins
 1. Revenue share-weighted margins
 2. The maximum margin as a *sufficient* condition

Critical loss: Differentiated margins

1. Revenue share-weighted margins

- Replace m in the above formulas with the revenue share-weighted average margin of the products in the candidate market
- NB: This method assumes that unit losses by the hypothetical monopolist as a result of a uniform SSNIP are proportional to revenue shares within the candidate market
 - This is a standard assumption used by economists in critical loss analysis in the absence of information on actual diversions

Critical loss: Differentiated margins

1. Revenue share-weighted average margins—Example

A homogeneous candidate market contains three products with different margins given in the table below. For a uniform 5% SSNIP, the hypothetical monopolist would lose 8% of its sales. Is the candidate market a relevant market?

- The data:

Product	Revenue		
	share	Margin	
A	0.5	0.4	Contributes 50% to the average margin
B	0.3	0.7	Contributes 30% to the average margin
C	0.2	0.3	Contributes 20% to the average margin

- Calculate the revenue share-weighted average margin:

$$m_{ave} = (0.5)(0.4) + (0.3)(0.7) + (0.2)(0.3) = 0.47$$

- Calculate the percentage critical loss using m_{ave} :

$$(\%CL) = \frac{\Delta q_{cl}}{q} = \frac{\delta}{\delta + m_{ave}} = \frac{0.05}{0.05 + 0.47} = 9.62\%$$

- Since the actual percentage loss (8%) is less than the percentage critical loss calculated using revenue share-weighted margins, the candidate market is a relevant market

Critical loss: Differentiated margins

2. The maximum margin as a *sufficient* condition

- Replace m in the above formulas with the *maximum margin* of the products in the candidate market
- A *sufficient* condition for the candidate market to be a relevant market is if the actual loss by the hypothetical monopolist is less than the critical loss using the maximum margin
 - This approach essentially assumes the worst case: all unit losses by the hypothetical monopolist as a result of a uniform SSNIP come from the product with the highest margin and hence yields the maximum profit loss on marginal sales
 - May use this test if data for a revenue-share-weighted margin is not available or cannot be estimated

This is a sufficient condition only: Failure to satisfy the test does not mean that the candidate market is not a relevant market, since if some losses come from lower margin products the true critical loss is lower than the critical loss calculated using the maximum margin

Critical loss: Differentiated margins

2. Maximum margin approach (sufficient condition)

The homogeneous candidate market contains three products with different margins given in the table below. For a 5% SSNIP, the hypothetical monopolist would lose 8% of its sales. Is the candidate market a relevant market?

- The data:

Product	Revenue	
	share	Margin
A	0.5	0.4
B	0.3	0.7
C	0.2	0.3

- Identify the maximum margin: $m_{max} = 0.7$
- Calculate the percentage critical loss using m_{max} :

$$(\%CL) = \frac{\Delta q_{cl}}{q} = \frac{\delta}{\delta + m_{max}} = \frac{0.05}{0.05 + 0.7} = 6.67\%$$

- Since the actual percentage loss (8%) is greater than the critical loss calculated using the maximum margin, the candidate market fails this sufficiency test
- BUT this does *not* mean that the candidate market is not a relevant market, since it assumes the worst possible losses for the hypothetical monopolist. Using a revenue share-weighted margin (prior slide), we saw that the candidate market is a relevant market

Critical loss

NB: By convention, Δq_{cl} is a positive number. Always watch for the sign of Δq in any equation.

■ Summary of formulas¹

□ Absolute terms (brute force):

Gain on retained sales

$$\Delta p (q - \Delta q_{cl}) = (p - c) \Delta q_{cl}$$

Loss of margin on lost sales

□ Unit critical unit loss:

$$(CL =) \Delta q_{cl} = \frac{q \Delta p}{(p + \Delta p) - c}$$

All variables are in units

□ Percentage critical loss:

$$(\%CL =) \frac{\Delta q_{cl}}{q} = \frac{\delta}{\delta + m}$$

All variables are in percentages

where δ is the percentage price increase: $\delta = \frac{\Delta p}{p}$

m is the percentage gross margin: $m = \frac{p - c}{p}$

¹ This is for the profitability implementation of the HMT and assumes constant marginal costs.

Critical loss

■ Summary of formulas¹

□ *Critical elasticity:*

$$|\varepsilon_{cl}| \cong \frac{1}{\delta + m}$$

All variables are in decimals because of the “1” in the numerator (If you want to use percentages, use “100” in the numerator)

where ε is the own-elasticity of demand of the monopolist (i.e., the aggregate demand curve)

□ *Percentage actual loss:*

$$\frac{\Delta q}{q} \cong \delta \varepsilon$$

Exact when the demand curve is linear

¹ This is for the profitability implementation of the HMT and assumes constant marginal costs.

Critical loss: Summary

■ Points to remember

- In the standard models, the hypothetical monopolist increases price by reducing output, which creates a scarcity in the product. Inframarginal customers then bid up the price in order to clear the market.
- While small reductions in output may increase profits, sufficiently large reductions will reduce profits below the prevailing level
- The maximum output reduction at which the hypothetical monopolist just breaks even on profits call the *critical loss*
 - The critical loss is the output reduction where the profits gained from the increase in margin in the inframarginal sales just equal the profits lost from the loss of the marginal sales
- *Test:* If the actual loss of sales due to a SSNIP is less than the critical loss, the SSNIP will be profitable and the candidate market will satisfy the HMT
- Implementations
 - “Brute force” accounting
 - Calculate the additional profit gain from the increase in margin on inframarginal sales ($\$SSNIP \times \text{inframarginal sales}$)
 - Calculate the profit loss from the lost marginal sales ($\$margin \times \text{marginal sales}$)
 - Compare: If the gains exceed the losses, then the product grouping is a relevant market
 - Use a critical loss formula

When in doubt, use “brute force” accounting—It is the most intuitive and will always work!

One-Product SSNIPs and Aggregate Diversion Analysis

Aggregate diversion analysis

■ Basic idea

- 1982 Merger Guidelines
 - Required that all products in the provisional market be increased by the same percentage SSNIP (the *uniform SSNIP test*)
- 1992 Merger Guidelines
 - The 1992 Merger Guidelines allowed a selective SSNIP
 - The practice was to use a selective SSNIP when the product in question was already selectively priced
- 2010 Merger Guidelines
 - After the 2010 Merger Guidelines, some economists—including agency economists in court proceedings—used price-discriminating SSNIPs in any differentiated products markets
 - A *one-product SSNIP* often creates the most narrow relevant markets, since internalizes the maximum amount of diversion
 - The “aggregate diversion ratio” method can determine whether a candidate market satisfies the hypothetical monopolist test under a one-product SSNIP
 - Some economists have used the aggregate diversion ratio method when imposing a uniform price increase across all products in the candidate market, but this requires some restrictive conditions
 - Examples: DOJ’s economist in H&R Block/TaxACT
FTC’s economist in Sysco/US Foods
DOJ’s economist in Aetna/Cigna

Diversion ratios

- Definition (when Firm A raises its price and Firm B holds its price constant):

$$D_{A \rightarrow B} \equiv D_{AB} = \frac{\Delta q_B}{\Delta q_A} \Bigg|_{\text{for some } \Delta p_A}$$

where Firm A increases prices by Δp_A and loses total sales of Δq_A , of which Δq_B go to Firm B

- *Keep in mind:* The definition of diversion ratios is motivated by Firm A's price *increasing* and a corresponding loss of A's sales, some of which divert to Firm B
 - More formally:

$$D_{AB} = \frac{\frac{\Delta q_B}{\Delta p_A}}{\frac{\Delta q_A}{\Delta p_A}} = \frac{\Delta q_B}{\Delta q_A} \Bigg|_{\text{for some } \Delta p_A}$$

Diversion ratios

■ Example

- Firm A raises its price by 5% and loses 100 units (all other firms hold their price constant)
 - 40 units divert to Firm B
 - 25 units divert to Firm C
 - 35 units divert to other products



- Then:

$$D_{A \rightarrow B} = \frac{40}{100} = 0.40 \text{ or } 40\%$$

$$D_{A \rightarrow C} = \frac{25}{100} = 0.25 \text{ or } 25\%$$

Since $D_{A \rightarrow B} > D_{A \rightarrow C}$,
B is generally regarded
as a closer substitute to
A than C

Diversion ratios

- How are diversion ratios estimated?
 1. Data collected during the regular course of business (including win-loss data)
 2. Indications in the company documents
 3. Consumer surveys
 - But very sensitive to survey design and customer ability to accurately predict product choice in the presence of a price increase
 4. Market shares as proxies: Relative market share method
 - Commonly used method when other data is not available
 - Assumes that customers divert in proportion to the market shares of the competitor firms (after adjusting for any out-of-market diversion)
 - So that the largest competitors (by market share) get the highest diversions
 5. Demand system estimation/econometrics
 - Econometric estimation of all own- and cross-elasticities of all interacting firms
 - Very demanding data requirements—Usually possible only in retail deals where point-of-purchase scanner data is available
 6. Switching shares as proxies
 - Where switching behavior is not limited to reactions to changes in relative price
 - Use only when better estimates are not available
 - *Example:* H&R Block/TaxACT (where the court accepted a diversion analysis based on IRS switching data only as corroborating other evidence)

Diversion ratios

■ How are diversion ratios estimated?

□ Relative market share method: Application

- When all diversion is to products within the candidate market:

$$D_{A \rightarrow B} = \frac{s_B}{s_B + s_C + \dots + s_N} = \frac{s_B}{1 - s_A},$$

That is, $D_{A \rightarrow B}$ is the share of firm B divided by the sum of the shares of the firms other than A in the candidate market

where s_A and s_B are the market shares of firms A and B, respectively

■ Example: Candidate market—

- Firm A 40%
 - Firm B 30%
 - Firm C 24%
 - Firm D 6%
 - No diversion outside the candidate market
- 60% points to be allocated to three firms pro rata by their market shares

Then:

$$D_{A \rightarrow B} = \frac{0.30}{1 - 0.40} = 50.0\%$$

$$D_{A \rightarrow C} = \frac{0.24}{1 - 0.40} = 40.0\%$$

$$D_{A \rightarrow D} = \frac{0.06}{1 - 0.40} = 10.0\%$$

Adds to 100%, to account for 100% of the diverted sales

Diversion ratios

■ How are diversion ratios estimated?

□ Relative market share method: Application (con't)

- When there is some diversion to products outside the candidate market:

$$D_{A \rightarrow B} = \left(1 - \frac{\Delta q_{outside}}{\Delta q_A} \right) \frac{s_B}{1 - s_A},$$

where $\frac{\Delta q_{outside}}{\Delta q_A}$ is the percentage of Firm A's lost sales that are diverted to firms outside

of the market

■ Example: Candidate market—

- Firm A 50%
 - Firm B 25%
 - Firm C 15%
 - Firm D 10%
 - Outside diversion: 15%
- Shares in the candidate market (= 100%)

→ 85% points to be allocated to the firms in the candidate market

The outside diversion is data (say, from empirical analysis) and not to be estimated

Then:

$$D_{A \rightarrow B} = (1 - 0.15) \frac{0.25}{1 - 0.50} = 42.5\%$$

$$D_{A \rightarrow C} = (1 - 0.15) \frac{0.15}{1 - 0.50} = 25.5\%$$

$$D_{A \rightarrow D} = (1 - 0.15) \frac{0.10}{1 - 0.50} = 17.0\%$$

$$D_{A \rightarrow O} = 15\%$$

Total 85%
With outside diversion: 100%

Diversion ratios in *H&R Block*

■ Warren-Boulton's derivation of diversion ratios in H&R Block/TaxACT

- Used market shares to estimate diversion ratios

□ Recall

- $s_{HRB} = 15.6\%$

- $s_{TaxACT} = 12.8\%$

□ So

$$D_{HRB \rightarrow TaxACT} = \frac{12.8\%}{1 - 15.6\%} = 15.2\%$$

$$D_{TaxACT \rightarrow HRB} = \frac{15.6\%}{1 - 12.8\%} = 17.9\%$$

- Interestingly, the court reported these diversion ratios as 14% and 12%

- Warren-Boulton probably had some diversion to an outside option that was not given by the court

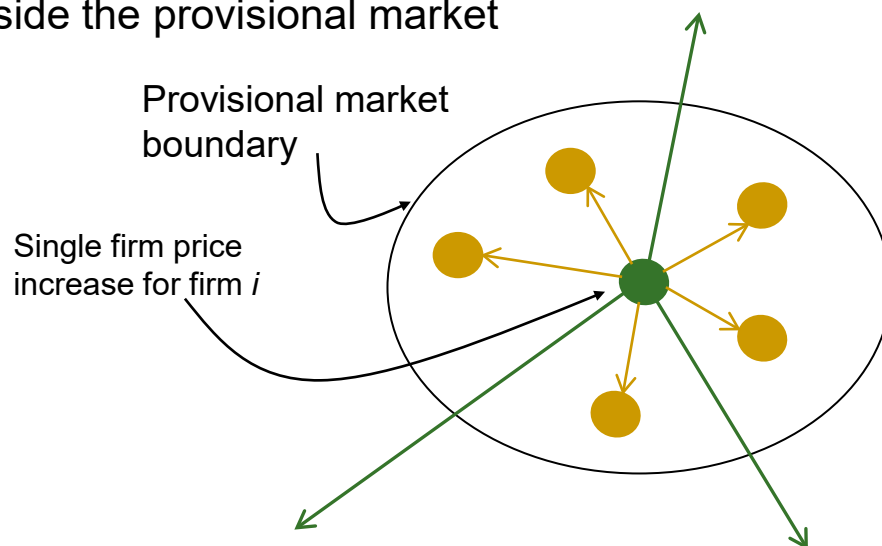
- An outside option (assisted and manual) of 17% for HRB gives $D_{HRB \rightarrow TaxACT} = 14\%$

- An outside option (assisted and manual) of 10% for TaxAct gives $D_{TaxACT \rightarrow HRB} = 12\%$

One-product SSNIP recapture test

■ Definition: Aggregate diversion ratio

- The percentage R_i of total sales lost by a given product in the wake of a SSNIP applied only to product i that is captured by the aggregate of the other products inside the provisional market



The aggregate diversion ratio is more descriptively call the *recapture ratio* or the *recapture rate*

- Internal diversion (R_i)
- External diversion ($1 - R_i$) (which is actual loss L_i)

□ Observation

- 100% of the total loss of sales by firm i is equal to the recapture percentage R_i that is retained by firms in the provisional market plus the loss of sales L_i to all firms outside the market (that is, $R_i + L_i = 100\%$ for all firms in the market)

One-product SSNIP recapture test

- The 2010 Merger Guidelines and the one-product SSNIP

The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products (“hypothetical monopolist”) likely would impose at least a small but significant and non-transitory increase in price (“SSNIP”) on **at least one product in the market, including at least one product sold by one of the merging firms**. For the purpose of analyzing this issue, the terms of sale of products outside the candidate market are held constant.¹

- This creates the *one-product SSNIP test*:

A provisional market is a relevant market if a hypothetical monopolist could profitably increase the price of one of the merging firm’s products by a SSNIP holding the prices of all other product constant

- NB: Just because one product in the candidate market fails the one-product SSNIP test does not preclude another product from passing it

¹ U.S. Dep’t of Justice & Fed. Trade Comm’n, Horizontal Merger Guidelines § 4.1.1 (rev. 2010) (emphasis added).

One-product SSNIP recapture test

■ The idea

- When the hypothetical monopolist increases the price of only one product in the candidate market, its lost sales divert both to—
 - Products outside of the market (“external diversion”), *and*
 - Other products inside the market (“internal diversion”)
- As always, the profitability of a one-product SSNIP will depend on whether the hypothetical monopolist profit gains from the profit gain will outweigh its profit losses
- But in the case of a one-product SSNIP, the gains will be—
 - The increase in margin on the inframarginal sales
 - PLUS the profits earned by other products in the candidate market on recaptured sales from internal diversion
- ***The test:*** Assume that there are n products in the candidate market. A one-product SSNIP in the price of product 1 is profitable for the hypothetical monopolist if and only if:

$$\begin{array}{|c|} \hline \text{Gains on the} \\ \text{inframarginal} \\ \text{sales of Product 1} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Profits on the lost} \\ \text{Product 1 sales} \\ \text{recaptured by} \\ \text{Products 2, } \dots, n \\ \hline \end{array} > \begin{array}{|c|} \hline \text{Loss of profits the} \\ \text{lost marginal} \\ \text{sales of Product 1} \\ \hline \end{array}$$

One-product SSNIP recapture test

■ “Brute force” method for single product price increase—Example 1

□ (Differentiated) Gourmet pizzas

- Assume that for a price increase of 5% of a single product, the hypothetical monopolist would retain 90 out of every 100 customers of that product. Of the 10 lost customers, 7 would divert to another gourmet pizza and 3 would go to a standard pizza. Assume that the price of gourmet pizzas is \$3.00 and that the dollar margin is \$1.50 per pie for all producers.

- *Query:* Under the single-product 5% SSNIP test, are gourmet pizzas a relevant product market?

Data	{	Out of every	100	Price	\$3.00
		units sold:		Margin	\$1.50
		Units retained	90	SSNIP (%)	5.00%
		Total units lost	10	SSNIP (\$)	\$0.150
		Units recaptured	7		
Analysis	{	Gain on inframarginal	\$13.50	Units retained (90) times \$SSNIP (\$0.15)	
		Loss on marginal sales	-\$15.00	Total units lost (10) times \$margin (\$1.50)	
		Gain on recapture	<u>\$10.50</u>	Recaptured units (7) times \$margin (\$1.50)	
		Net gain	\$9.00		

- Since the 5% price increase results in a net profit gain, gourmet pizzas are a relevant market

One-product SSNIP recapture test

- “Brute force” method for single product price increase—Example 2
 - We can use the brute force method for a single product price when *dollar margins* differ among products within the candidate market (here, $\$m_2 = 1.75$; $\$m_3 = 1.35$)
 - Of firm G1’s 10 marginal customers, 4 divert to firm G2 and 3 divert to firm G3
 - A “brute force” accounting calculation is almost always the best way to analyze the profitability of a single-product SSNIP when dollar margins differ in the candidate market

Gourmet pizza--Single product price increase

(brute force method--different margins for candidate market of three firms)

Out of every 100 units sold by Firm G1 (the firm experiencing the price increase):

Data	For Firm G1:		For Firm G2:		For Firm G3:	
	Total units retained	90				
	Total unit diverted	10	Total units recaptured	4	Total units recaptured	3
	G1 price	\$3.00				
	G1 margin	\$1.50	G2 \$margin	\$1.75	G2 \$margin	\$1.35
	SSNIP (%)	5.00%				
	SSNIP (\$)	\$0.15				
	Gain on retained units	\$13.50	Gain on recaptured units	\$7.00	Gain on recaptured units	\$4.05
	Loss on diverted units	-\$15.00				
	Total gross gain to HM	\$24.55	= \$13.50 + \$7.00 + \$4.05			
	Total gross loss to HM	-\$15.00				
	NET GAIN	\$9.55				

Since the net gain to the hypothetical monopolist is positive, the candidate market is a relevant market

One-product SSNIP recapture test formulas

■ The test

- *Proposition:* A candidate market is a relevant market under a one-product SSNIP recapture test for Product 1 if:

$$R_1 > R_{Critical}^1 = \frac{\delta p_1}{\$m_{RAve}} \left(= \frac{\$SSNIP_1}{\$m_{RAve}} \right).$$

That is, if this condition is satisfied, a hypothetical monopolist could profitably increase the price of Product 1 by δ

- *Observations:*

1. NB: Any product in the candidate market can be Product 1

- I assume that the SSNIP would apply to Product 1 to simplify the notation

2. Under the Merger Guidelines, as long as one product satisfies the one-product SSNIP recapture test, the candidate market is a relevant market

- This is true even if all of the other products in the candidate market fail the test

- *Corollary 1 (identical margins):* When all products have identical dollar margins $\$m$, the formula reduces to:

$$R_1 > R_{Critical}^S = \frac{\delta p_1}{\$m} \left(= \frac{\$SSNIP_1}{\$m} \right).$$

One-product SSNIP recapture test formulas

Corollaries

Exam hint: Except for the simplest case (symmetry), it is easier, more intuitive, and hence easiest to doublecheck if you use brute force

- Corollary 2: When the percentage margins m_o of the other products are the same (m_o), the test becomes:

$$R_1 > R_{Critical}^S = \frac{\delta}{m_o} \frac{p_1}{p_{RAve}}$$

That is, if this condition is satisfied, a hypothetical monopolist could profitably increase the price of Product 1 by δ

where p_{RAve} is the recapture share-weighted average of the prices of the other products in the candidate market (i.e., all the products except for product 1)

- Corollary 3: When the prices of the other products are the same (p_o), the test becomes:

$$R_1 > R_{Critical}^S = \frac{\delta}{m_{RAve}} \frac{p_1}{p_o}$$

where m_{RAve} is the recapture share-weighted average of the percentage gross margins of the other products in the candidate market (i.e., all the products except for product 1)

- Corollary 4: When the prices of all products in the candidate market are the same but the margins differ, the test becomes:

$$R_1 > R_{Critical}^S = \frac{\delta}{m_{RAve}}$$

- Corollary 5 (symmetric products): When all products in the candidate market have the same prices p and margins m_o , the test becomes:

$$R_1 > R_{Critical}^S = \frac{\delta}{m_o}$$

Note: Products can be differentiated (i.e., support different prices) even when in the current market equilibrium the prices and margins of all products are identical (e.g., consider hospitals).

One-product SSNIP recapture test formulas

■ Calculating recapture share-weighted averages

□ The idea

- The general one-product SSNIP recapture test uses a *recapture share-weighted average* of the dollar margins of all “other” products in the candidate market ($\$m_{RAve}$)

□ Example

- There are five products A,B,C,D, and E. Are products A,B,C, and D a relevant market? Test using a one-product SSNIP recapture test for product A for a 5% SSNIP.

1. Data

	Diversion Ratio	Price	\$margin
Product			
A	–	\$10.00	\$5.00
B	0.1	\$6.00	\$3.00
C	0.4	\$12.00	\$6.00
D	0.3	\$9.00	\$4.50
E	0.2	\$8.00	\$4.00

2. Determine the aggregate recapture rate for products B, C, and D

	Diversion Ratio
Product B	0.1
C	0.4
D	0.3
Aggregate recapture	0.8

This is the aggregate recapture rate for product A (R_A)

One-product SSNIP recapture test formulas

■ Calculating weighted averages

□ Example (con't)

3. Determine the recapture share for reach product ($= D_{A \rightarrow i} / \text{Aggregate recapture rate}$)

	Recapture Share	
	Calculation	Percentage
Product B	0.1/0.8	12.50%
C	0.4/0.8	50.00%
D	0.3/0.8	37.50%
		100.00%

NB: Recapture share is the firm j 's percentage share of the total number of units recaptured in the candidate market. The sum of all recapture shares total 199%. The recapture share is *not* the diversion ratio if there is diversion outside of the market.

4. Calculate the recapture share-weighted dollar margin contributions by multiplying the product's recapture share by its dollar margin

	Weighted \$m contributions	
	Calculation	Contribution
Product B	0.125*\$3.00	\$0.3750
C	0.500*\$6.00	\$3.0000
D	0.375*\$4.50	\$1.6875
	$\$m_{RAve} =$	\$5.0625

5. Sum the contributions to obtain the recapture share-weighted dollar margin

One-product SSNIP recapture test formulas

■ Calculating weighted averages

□ Example (con't)

6. Calculate the dollar SSNIP for product A (\$SSNIP_A)

$$\begin{array}{rcl} \delta & & 0.05 \\ \text{A's price} & & \$10.00 \\ \hline \text{\$SSNIP}_A & & \$0.50 \end{array}$$

7. Calculate the critical recapture rate for product A

$$\begin{aligned} R_{Critical}^A &= \frac{\delta p_A}{\$m_{RAve}} \left(= \frac{\text{\$SSNIP}_A}{\$m_{RAve}} \right) \\ &= \frac{\$0.50}{\$5.06} \\ &= 9.9\% \end{aligned}$$

8. Compare actual recapture rate (R_1) to the critical recapture rate

From Step 2

$$R_A = 0.80 > R_{Critical}^A = 0.099$$

Products A, B, C, and D satisfy the one-product critical recapture test for product A and so those products are a relevant market under the hypothetical monopolist test

One-product SSNIP recapture test formulas

■ Calculating weighted averages

□ Example (con't)

- Steps 1-5 illustrate the calculation of the recapture share-weighted average dollar margin for the “other” products ($\$m_{RAve}$)
- Without going through all of the steps, the formula is:

Dollar margin

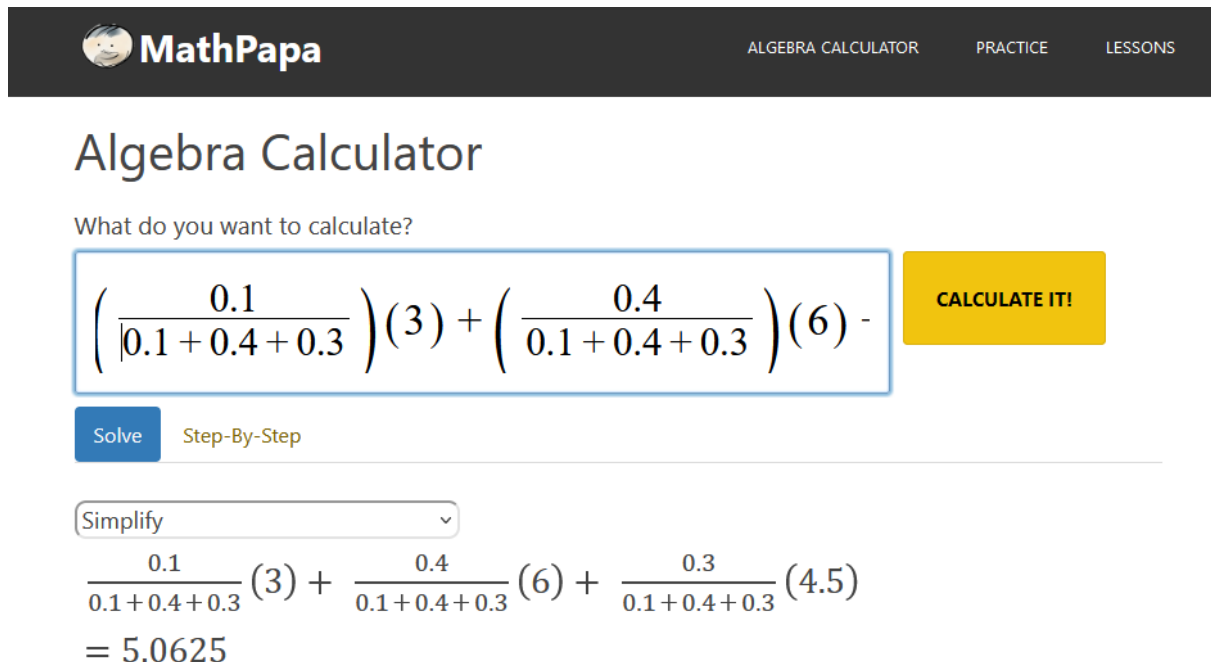
Diversion weight

$$\begin{aligned}\$m_{RAve} &= \frac{D_{A \rightarrow B}}{D_{A \rightarrow B} + D_{A \rightarrow C} + D_{A \rightarrow D}} \$m_B + \frac{D_{A \rightarrow C}}{D_{A \rightarrow B} + D_{A \rightarrow C} + D_{A \rightarrow D}} \$m_C + \frac{D_{A \rightarrow D}}{D_{A \rightarrow B} + D_{A \rightarrow C} + D_{A \rightarrow D}} \$m_D \\ &= \left(\frac{0.1}{0.1 + 0.4 + 0.3} \right) (3.00) + \left(\frac{0.4}{0.1 + 0.4 + 0.3} \right) (6.00) + \left(\frac{0.3}{0.1 + 0.4 + 0.3} \right) (4.50) \\ &= (0.125)(3.00) + (0.500)(6.00) + (0.375)(4.50) \\ &= 0.675 + 3.00 + 0.16875 \\ &= 5.0625\end{aligned}$$

Set up the problem and use Mathpapa to calculate!

One-product SSNIP recapture test formulas

- Using Mathpapa to calculate the recapture share-weighted average dollar margin of the “other” products



The screenshot shows the MathPapa Algebra Calculator interface. At the top, there is a dark header with the MathPapa logo and navigation links for ALGEBRA CALCULATOR, PRACTICE, and LESSONS. Below the header, the title "Algebra Calculator" is displayed. A prompt "What do you want to calculate?" is followed by a large input box containing the formula:
$$\left(\frac{0.1}{0.1 + 0.4 + 0.3} \right) (3) + \left(\frac{0.4}{0.1 + 0.4 + 0.3} \right) (6) -$$
 To the right of the input box is a yellow button labeled "CALCULATE IT!". Below the input box, there are two buttons: "Solve" (highlighted in blue) and "Step-By-Step". Under the "Solve" button, a dropdown menu is set to "Simplify". Below the dropdown, the calculated result is shown:
$$\frac{0.1}{0.1 + 0.4 + 0.3} (3) + \frac{0.4}{0.1 + 0.4 + 0.3} (6) + \frac{0.3}{0.1 + 0.4 + 0.3} (4.5)$$
$$= 5.0625$$

One-product SSNIP recapture test

■ The test

□ Technical caution

- $R_{Critical}^1$ is specific to product 1 and is a function of the quantity of marginal sales lost by product 1 in the wake of a SSNIP
 - This is because m for any firm depends on $\%m$, which in turn depends on the elasticity of demand to satisfy the Lerner condition for a profit-maximizing firm. Changing the quantity of lost marginal sales changes the elasticity, and implies a different margin and hence a different critical recapture ratio.
- So once you have calculated $R_{Critical}^1$ for some specific quantity of lost marginal sales, you cannot use the same $R_{Critical}^1$ in a one-product SSNIP test if you assume that firm 1 loses a different quantity of marginal sales. You need to recalculate $R_{Critical}^1$.

One-product SSNIP recapture tests: Examples

■ Example 1A: Single-product SSNIP test (symmetric products)

□ Gourmet pizzas

- Assume that for a single product price increase of 5%, the hypothetical monopolist would retain 10 out of every 100 customers. Of the 10 lost customers, 7 would divert to another gourmet pizza and 3 would go to a standard pizza. Assume that the price of gourmet pizzas is \$3.00 and that the dollar margin is \$1.50 per pie for all producers.
- *Query:* Under the single-product 5% SSNIP test, are gourmet pizzas a relevant product market?
- *Answer:*

The products are symmetrical (identical prices and margins), so use the one-product SSNIP test for symmetric products: The one-product SSNIP is profitable if $R_1 > \delta/m$.

$$\delta = 0.05$$

$$m = 0.5\%$$

$$\text{So } \delta/m = 10\%$$

$$R_1 = 70\%$$

$R_1 > \delta/m$, so the one-product SSNIP test is satisfied, the hypothetical monopolist can profitably increase the price of product 1 by 5%, and gourmet pizzas are a relevant market (The same result as we obtained earlier).

Generally, as long as $R_1 > 10\%$ in this problem, the one-product SSNIP test will be satisfied.

One-product SSNIP recapture tests: Examples

■ Example 2A: Single-product SSNIP test (same price, different margins)

- We can use Corollary 3 when the prices of the products in the candidate market are the same but the margins differ

- Product 2 recaptures 2 units at $\$m_2 = 1.75$
Product 3 recaptures 5 units at $\$m_3 = 1.05$

- **Answer:**

The products different dollar margins, so one-product SSNIP for Product 1 is profitable for a hypothetical monopolist if:

$$R_1 > \frac{\delta}{m_{RAve}}.$$

where m_{RAve} is the recapture share-weighted average of the percentage margins of the other products in the candidate market (i.e., all the products except for product 1)

	Gourmet pizzas			
	1	2	3	
Price	3	3	3	From problem
\$margin	1.5	1.75	1.05	From problem
Loss	10			From problem
#Recapture (units)		2	5	From problem
%Recapture		28.57%	71.43%	100.00%
\$margin contribution		0.5000	0.7500	Recapture shares (% of total recapture)
Average \$m _{RAVE}				%Recapture times \$margin
%m _{RAVE}				Sum of \$margin contributions
δ	5%			Average \$m _{RAVE} /price
δ / m _{RAVE}	12.00%			From problem
R ₁	70.00%			Calculated
				From problem

$R_1 > \delta/m_{RAVE}$, so the one-product SSNIP test is satisfied, the hypothetical monopolist can profitably increase the price of product 1 by 5%, and gourmet pizzas are a relevant market (The same result as we obtained earlier).

One-product SSNIP recapture test

■ A caution

- In a well-known paper, Katz and Shapiro derived a different condition for a one-product SSNIP test:

$$R_1 > \frac{\delta}{\delta + m_{RAve}},$$

where the prevailing prices for all products are equal.¹

This condition is INCORRECT for a one-product SSNIP test!

- The problem is that the Katz-Shapiro proof assumed that the recaptured sales would be sold at the original price of the recapturing product *increased* by the SSNIP, but in a one-product SSNIP recapture test the recaptured sales would be sold at the original prices charged by the other firms in the market
 - I note this only because this incorrect condition is still in circulation
 - However, it will be a useful condition in a uniform SSNIP test for differentiated products

¹ See Michael Katz & Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, Antitrust, Spring 2003, at 53 & n.25.

Uniform SSNIPs and the Aggregate Diversion Ratio Test

Aggregate diversion ratio test

- Extension to a uniform SSNIP
 - Some economists have attempted to create a recapture test for hypothetical monopolist imposing a *uniform* SSNIP in a differentiated candidate market
 - *Remember:* With recapture, the net profits of the hypothetical monopolist from a price increase in each product i taken individually comprise in—
 - The net loss on the sales of product i resulting from the price increase, *and*
 - All incremental profits earned by other firms in the candidate market from the capture of sales diverted from product i
 - When the hypothetical monopolist increases all prices in the candidate market by a SSNIP, its overall profit is the sum of the net profits from each of the individual products

Aggregate diversion ratio test

■ Extension to a uniform SSNIP

□ Observations:

1. In a single-product SSNIP test, the price of only one product in the candidate market is increased and the diversion and recapture ratios are determined holding the prices of all other firms in the candidate market constant
2. In a uniform SSNIP test, the price of all products in the candidate market are increased and the diversion and recapture ratios are determined using these higher prices for all products in the candidate market
3. The diversion ratios are likely to be different in the two situations
 - With the one-product SSNIP, the diversion ratios are from the higher priced SSNIP product to the originally priced other products
 - With a uniform SSNIP, the diversion ratios are from one higher-priced SSNIP product to (now less attractive) other higher-priced SSNIP products

In general, we can expect the diversion ratios with a one-product SSNIP to be higher than the diversion ratios for a uniform SSNIP

Aggregate diversion ratio test

■ The aggregate diversion ratio test for a uniform SSNIP

- *Proposition 1.* A hypothetical monopolist earns positive profits on product i from a uniform SSNIP in the candidate market if:

$$R_i^u > \frac{p_i \delta}{\$m_{RAve} + \$SSNIP_{RAve}} = \frac{\$SSNIP_1}{\$m_{RAve} + \$SSNIP_{RAve}} \equiv R_{Critical}^u$$

Call the right-hand side the *critical recapture rate* for a uniform SSNIP.

New term accounting for higher margins for recapturing products

- *Corollary (symmetric products):* If the products in the candidate market are symmetric (same prices p and percentage margins m), then a hypothetical monopolist earns positive profits on product i from a uniform SSNIP in the candidate market if:

$$R_i^u > \frac{p_i \delta}{\$m_{RAve} + \$SSNIP_{RAve}} = \frac{p \delta}{pm + p \delta} = \frac{\delta}{\delta + m}$$

The critical recapture rate in the symmetric case is the same as the percentage critical loss

- In the literature and some cases, the symmetric case is the variation most commonly discussed

Aggregate diversion ratio test

- A sufficiency test

- *Proposition 2 (sufficiency):* If:

$$R_i^U \geq R_{Critical}^U \quad \text{for all firms } i \text{ in the candidate market}$$

$$R_j^U > R_{Critical}^U \quad \text{for some firm } j \text{ in the candidate market}$$

then the uniform SSNIP will be profitable for the hypothetical monopolist and the candidate market will be a relevant market

- Proposition 2 simply says that if, in the wake of a uniform SSNIP, the hypothetical monopolist at least breaks even on every product in the candidate market and makes strictly positive profits on at least one product, the uniform SSNIP is profitable
 - Proposition 2 only states a *sufficient* condition
 - Failure to satisfy the test does not mean that the candidate market is not a relevant market
 - It is possible for a hypothetical monopolist to make positive profits from a uniform SSNIP even if it losses money in some products as long as it offsets those losses from positive profits in other products

Aggregate diversion ratio test

■ Example: Aggregate diversion ratio test

□ Differentiated three-product candidate market

■ Parameters (symmetric products)

- Each product has the same price of \$100
- Each product has a margin of 60%
- Assume a uniform SSNIP of 5% across all products

■ Then use the symmetric version of the aggregate diversion ratio test:

$$R_{Critical}^U = \frac{\delta}{\delta + m} = \frac{0.05}{0.05 + 0.60} = 0.0769 \text{ or } 7.69\%$$

■ Suppose that the uniform SSNIP generates the following actual recapture rates:

Product	q	Δq	Recapture	
			Units	Rate (R_i^U)
A	1200	100	30	30.00%
B	900	75	12	16.00%
C	600	50	10	20.00%

- **Result:** Since the smallest R_i^U (16.00%) is greater than $R_{Critical}^U$ (7.69%), a hypothetical monopolist can profitably sustain a 5% uniform price and so the three products is a relevant market

Aggregate diversion ratio test

■ A “presumptive” test

- Some commentators suggest that in a uniform SSNIP test, the single-product SSNIP diversion and recapture rates can be used in Proposition 2 to create a *presumption* that the condition is satisfied and the candidate market is a relevant market¹
- But the recapture ratios across products in the candidate market will at least as high and likely higher using a single-product SSNIP than a uniform SSNIP because of the prices of substitute products will be lower in the former situation. Therefore, we should expect:

$$R_i^S \geq R_i^U.$$

- As one analyst noted:

Unless the different products within a candidate antitrust market increase prices by different amounts, it is likely there will be little substitution among the products within the candidate market. Consequently, when there is a price increase across all products in the candidate market the value of the Aggregate Diversion Ratio is likely to be close to zero.²

- Consequently, the presumptive test must be used with great care, if used at all

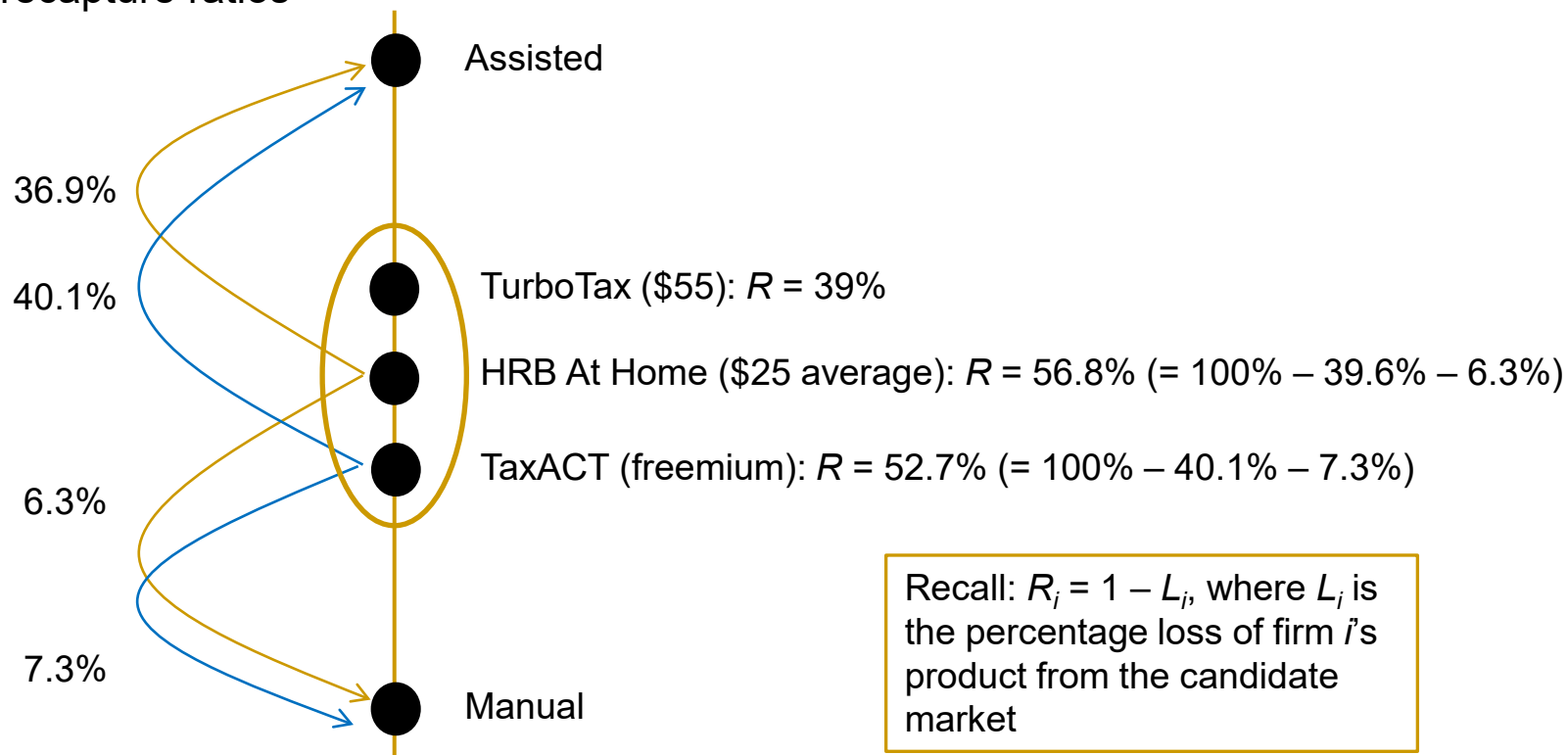
¹ Michael Katz & Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, Antitrust, Spring 2003, at 54 (footnote omitted).

² Barry Harris, *Recent Observations About Critical Loss Analysis* (undated), <https://www.justice.gov/atr/recent-observations-about-critical-loss-analysis>

Aggregate diversion ratio test

■ Warren-Bolton analysis in H&R Block/TaxACT

- Recall that Warren-Boulton relied on IRS switching data to estimate aggregate recapture ratios



- *Query:* Does the use of switching data indicated that the estimated R_i 's are for a single-product SSNIP or a uniform SSNIP?

“Aggregate diversion ratio”

■ Warren-Bolton analysis in H&R Block/TaxACT

1. *Question*: Is DDIY a relevant market under a uniform SSNIP test?

2. *Critical aggregate diversion ratio* ($R_{Critical}^U$)

■ Starting point: Start with DDIY products (HRB, TaxACT, and TurboTax)

■ SSNIP (δ): 10%

■ Gross margin (m): 50% on each product (Warren-Bouton assumption)

■ Then:

$$R_{Critical}^U = \frac{\delta}{\delta + m} = \frac{10\%}{10\% + 50\%} = 16.7\%$$

3. *Actual loss*: Determine aggregate diversion ratios (recapture rates R_i^U) for each product

■ *Test*: If each $R_i^U \geq R_{Critical}^U$ for all products in the candidate market and $R_i^U > R_{Critical}^U$ for at least one product i , then product grouping is a market

■ Using IRS switching data as a proxy for R , Warren-Bolton found:

□ HRB: $R_{HRB} = 57\%$

□ TaxACT: $R_{TaxACT} = 53\%$

□ TurboTax: $R_{TurboTax} = 39\%$

4. *Conclusion* (Warren-Boulton)

■ Since each $R_i^U > R_{Critical}^U$, a hypothetical monopolist of the DDIY product could profitably raise price by a uniform SSNIP and therefore DDIY was a relevant product market

Implementations of the Hypothetical Monopolist Test: SUMMARY

Summary

1. Prevailing (premerger) conditions

- ❑ Competitive interactions established premerger equilibrium in prices and production quantities
- ❑ Also establishes other competitive variable such as product attributes, but we do not have good models for this

2. Hypothetical monopolist test

- ❑ Seeks to identify a product grouping (relevant market) that contains the product of one or both of the merging firms in which market power could be exercised
- ❑ *Test*: Whether a hypothetical monopolist of the product grouping could profitably implement “small but significant nontransitory increase in price” (SSNIP) above the prevailing prices in one or more products in the grouping, including at least one of the products of the merging firms
- ❑ The test is satisfied when the profits gained from the increase in margin in the inframarginal sales outweigh the profits lost from the loss of the marginal sales

Summary

3. Critical loss in homogeneous product markets

- ❑ In the standard models, the hypothetical monopolist increases price by reducing output, which creates a scarcity in the product. Inframarginal customers then bid up the price in order to clear the market.
- ❑ While small reductions in output may increase profits, sufficiently large reductions will reduce profits below the prevailing level
- ❑ The output reduction beyond which any further reduction is unprofitable is called the *critical loss*
 - The critical loss is the output reduction where the profits gained from the increase in margin in the inframarginal sales just equal the profits lost from the loss of the marginal sales
- ❑ **Test:** If the actual loss of sales due to a SSNIP is less than the critical loss, the SSNIP will be profitable and the candidate market will be a relevant market

Summary

4. One-product SSNIP tests in differentiated products markets

- ❑ In differentiated products market, different products can have different prices and margins
- ❑ The Merger Guidelines recognize as relevant markets products grouping where the hypothetical monopolist can profitably increase the price of one product, provided it is a product of one of the merging firms
- ❑ The same basic critical loss analysis applies with one significant modification: When the product with the SSNIP loses marginal sales, some of those lost sales are “recaptured” by other products in the candidate market
- ❑ The hypothetical monopolist earns profits on the recaptured sales that can be used to offset profit losses from lost marginal sales
 - The profit for each unit recaptured by any “other” product is the other product’s original dollar margin (since the price of the recapturing product is not increased by the SSNIP)
- ❑ The recapture rate on the lost marginal units that is just necessary for the hypothetical monopolist to break even with a SSNIP on one product is called the (one-product) *critical recapture rate*
 - The critical recapture rate is specific to the product on which the SSNIP is imposed, the diversion ratios from that product to other products in the market, and the dollar margins of all products
- ❑ **Test:** For the product on which the SSNIP is imposed, if the actual recapture rate exceeds the critical recapture rate, the SSNIP will be profitable and the candidate market will be a relevant market

Summary

5. Uniform SSNIP tests in differentiated products markets

- In some differentiated products markets, the prices tend to move together
- In these situations, it may be most realistic for the hypothetical monopolist to impose a uniform SSNIP on all products in the candidate market
- The analysis and the test is the same here as it is for the one-product SSNIP recapture test except:
 - The margins of all products in the candidate market are increased by the SSNIP
 - The diversion ratios should take into account that all prices in the candidate market will be increased (so that, in general, the diversion ratios in the uniform SSNIP case should be less than the diversion ratios in the one-product SSNIP case)

Merger Simulation

Merger simulation

■ Warren-Boulton

- In addition to critical loss analysis, used “merger simulation” to predict price increases resulting from the merger to test whether a hypothetical monopolist would increase prices postmerger more than a SSNIP

■ Warren–Boulton results

- Used Bertrand pricing model
- Predicted price increases as a result of the merger—
 - TaxACT 83%
 - HRB 37%
 - TurboTax 11%

■ Court

- Confirms DDIY as a relevant market
 - But discusses in competitive effects analysis

As did the Court, we will defer an examination of the Warren-Boulton simulation model until the anticompetitive effects analysis

Defendants' Market Definition Rebuttal

Dr. Christine Meyer

- Three lines of attack:
 1. Warren-Boulton's analysis is unreliable
 2. Warren-Boulton's analysis failed the smallest market principle
 3. More reliable analysis shows that the relevant product market is all tax preparation methods

Warren-Boulton's analysis is unreliable

1. IRS switching data did not test for cross-price elasticity
 - ❑ Merging parties' primary critique
 - ❑ Court:
 - Agreed, but still probative when keeping the limitations in mind (especially since it is the best data available)—but not conclusive
2. DDIY excludes assisted (closest substitute to HRB) and manual (closest to TaxACT)
 - ❑ Meyer used “simulated diversion data” (from survey) to detect close substitutes
 - ❑ Court:
 - Survey data unreliable (omitted prices for many choices)
 - Meyer erred in aggregating all assisted into one product and all manual into one product, while disaggregating within DDIY
3. Even using IRS switching data, RWB did not include all closest substitutes
 - ❑ Court: Not correct if products are properly disaggregated:
 - HRB: 56.8% to DDIY; 36.9% to assisted; 6.3% to manual
 - TaxACT: 52.7% to DDIY; 40.1% to assisted; 7.3% to manual

Failed the “smallest market principle”

■ Merging parties’ criticism:

- Using critical loss analysis, HRB+Intuit and TaxACT+Intuit alone are both smaller relevant markets
 - Presumably, HRB+Intuit was not a market under the HMT because of the large diversions to Intuit
- Tried to discredit Warren-Boulton’s initial provisional market of all DDIY products

■ Warren-Boulton response:

- Markets need to make sense
- These smaller markets do not make sense
 - Presumably in light of functional similarities and document evidence

■ Court:

- Warren-Boulton’s critical loss analysis is supportive of DDIY as the relevant market, but not dispositive

Meyer's affirmative market definition case

1. Review of party documents (rejected by court)
2. Assisted is the most popular method across complexity levels
 - Simple returns: 44% assisted
 37% DDIY
 - Court:
 - Still correlates with complexity
 - Says nothing about how consumers would switch in the wake of a SSNIP

Meyer's affirmative market definition case

3. "Pricing simulator" (dynamic excel spreadsheet)

- ❑ Developed by HRB in 2009—uses discrete choice survey of 6119 respondents
- ❑ Choices:
 - Online DIY
 - Software DIY
 - CPA/accountant
 - Manual (including friends/family)
- ❑ Meyer
 - Used simulator to calculate diversion ratios
 - Found HRB largest diversion to CPA/accountant, second largest to manual
- ❑ Court: Analysis critically flawed
 - Not all of the options in the survey had prices associated with them (including CPA/accountant HRB retail office, pen & paper)
 - Respondents appear not to have appreciated or considered price differences → renders analysis unreliable
- ❑ Warren-Boulton
 - Pricing simulator also has demand increasing for some products (TaxCut Online Basic) with price increases (violates assumption of downward-sloping demand curve)
 - Some results inconsistent and anomalous

Meyer's affirmative market definition case

4. 2011 email survey of TaxACT customers

- ❑ Jointly commissioned by TaxACT and HRB
- ❑ One primary question: “If you had become dissatisfied with TaxACT's price, functionality, or quality, which of these products or services would you have considered using to prepare your federal taxes?”
- ❑ Provided a list of options and asked respondent to select—
 - all applicable alternative options, and
 - The respondent's top choice
- ❑ Sent out 46,899 requests—ultimately 1089 responded
- ❑ Survey results showed that—
 - 27-34% would switch to manual
 - 4-10% to HRB At Home
- ❑ Meyer: Shows that TaxACT and HRB are not close substitutes
- ❑ Dr. Ravi Dhar (FTC's rebuttal expert)
 - Survey asks about switching, not diversion in response to price changes
 - IRS data does same and is much more complete and extensive
- ❑ Court:
 - Survey is not reliable – REJECTED
 - Other critiques (e.g., high level of nonresponses (>98%) could have biased result)

Conclusion on expert testimony

■ Court:

- Viewed Warren-Boulton analysis as more persuasive generally
- With Meyer's testimony based on the pricing simulator and email survey rejected, little else remains of her affirmative market definition testimony
- Although RWB analysis is not conclusive, it tends to confirm conclusions drawn from other evidence in the case

Court finding of fact: DDIY is the relevant product market

Unit 9: H&R Block/TaxACT

Part 2. Anticompetitive Effect in Horizontal Mergers

- a. *PNB* presumption
- b. Coordinated effects
- c. The elimination of a “maverick”
- d. Unilateral effects

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

The H&R BLOCK logo is displayed within a green square. The text "H&R" is on the top line and "BLOCK" is on the bottom line, both in white, bold, sans-serif capital letters. A registered trademark symbol (®) is located at the top right of the word "BLOCK".

**H&R
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The TaxAct logo features the word "Tax" in red and "Act" in dark blue, both in a bold, sans-serif font. A stylized white 'X' is positioned between the two words. A registered trademark symbol (®) is located at the top right of the word "Act".

TaxAct®

Part 2 of the Prima Facie Case: The *PNB* Presumption

Introduction

- Likely competitive effect

- Having established the dimensions of the relevant market in which to assess the merger, the next step was to assess the merger's likely competitive effect in this market

- *Baker Hughes*

- Recognizes that a prima facie showing of the requisite anticompetitive effect may be made through the *Philadelphia National Bank* presumption

- The *PNB* presumption

Specifically, we think that a merger which **produces a firm controlling an undue percentage share of the relevant market**, and **results in a significant increase in the concentration of firms** in that market is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.¹

¹ United States v. Philadelphia National Bank, 374 U.S. 321, 363 (1963).

The *PNB* presumption

- Court uses the Merger Guidelines thresholds as triggers for the *PNB* presumption

	Premerger Shares	HHI Contribution	
Intuit	62.2%	3869	The square of the firm's market share
HRB	15.6%	243	
TaxACT	12.8%	164	
Others (6)	9.4%	15	Residual share (9.4%) divided by 6 firms and added six times
	100.0%	4291	The sum of the squared shares of all of the firms in the market
Combined share	28.4%		
Premerger HHI		4291	
Delta (Δ)		400	$2 \times \text{HRB share} \times \text{TaxACT share}$
Postmerger HHI		4691	Sum of the premerger HHI + Δ

“Violates” the 2010 Guidelines:
Postmerger HHI exceeds 2500 and delta exceeds 200

Note: Court appears to have assumed that six equal-sized firms are in the “other” category

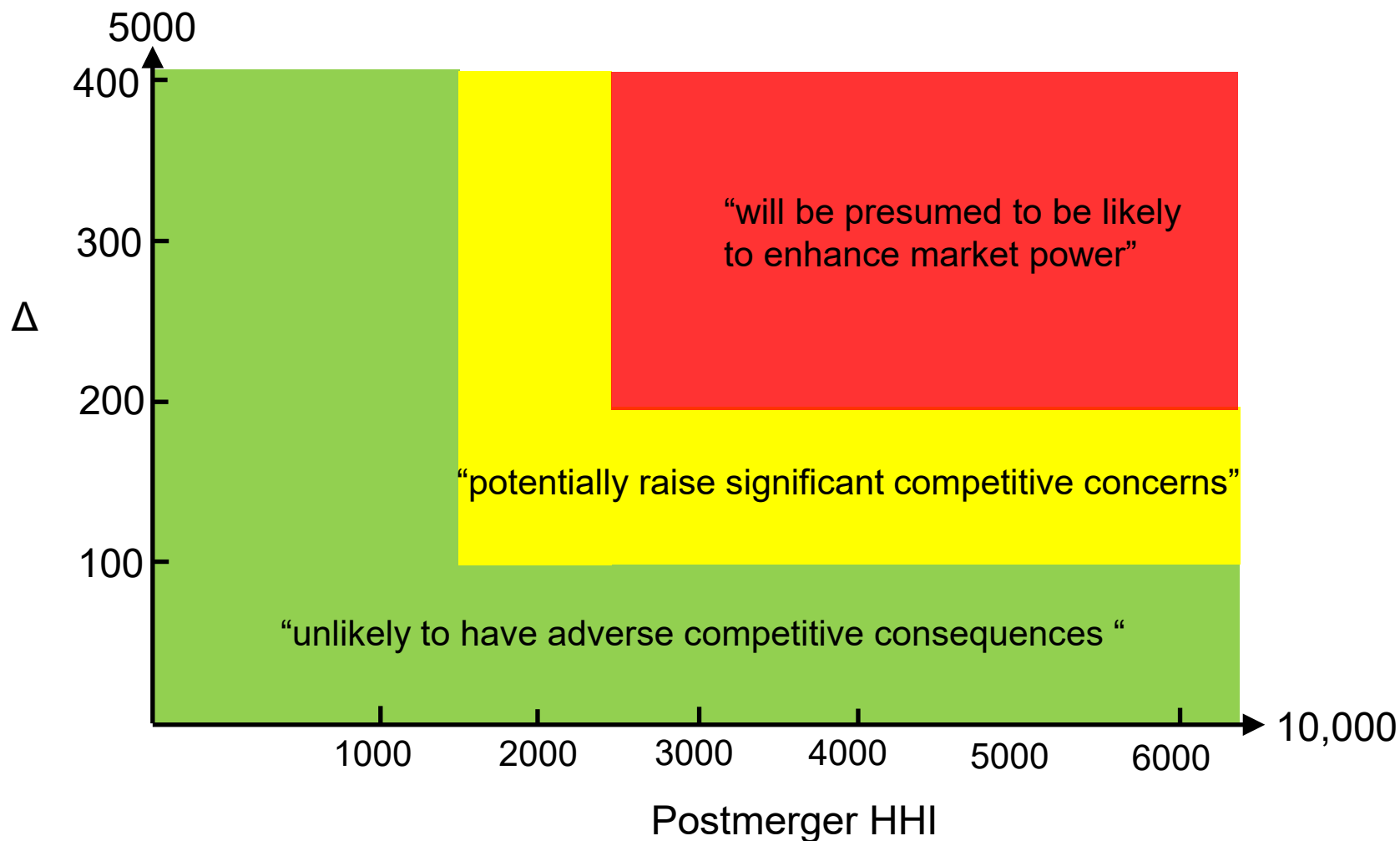
The *PNB* presumption

- The 1982 Merger Guidelines
 - Provided new market share thresholds to be used by the DOJ based on:
 - The change in the HHI (the “delta”) resulting from the merger, and
 - The postmerger HHI
- The 2010 Merger Guidelines: Current thresholds

Postmerger HHI	Δ HHI	Guidelines
< 1500	< 100	“unlikely to have adverse competitive consequences and ordinarily require no further analysis”
	--	“unlikely to have adverse competitive consequences and ordinarily require no further analysis”
Between 1500 and 2500	≥ 100	“potentially raise significant competitive concerns and often warrant scrutiny”
> 2500	100-200	“potentially raise significant competitive concerns and often warrant scrutiny”
	≥ 200	“will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.”

The *PNB* presumption

- The current thresholds: 2010 Merger Guidelines



The 2010 Merger Guidelines

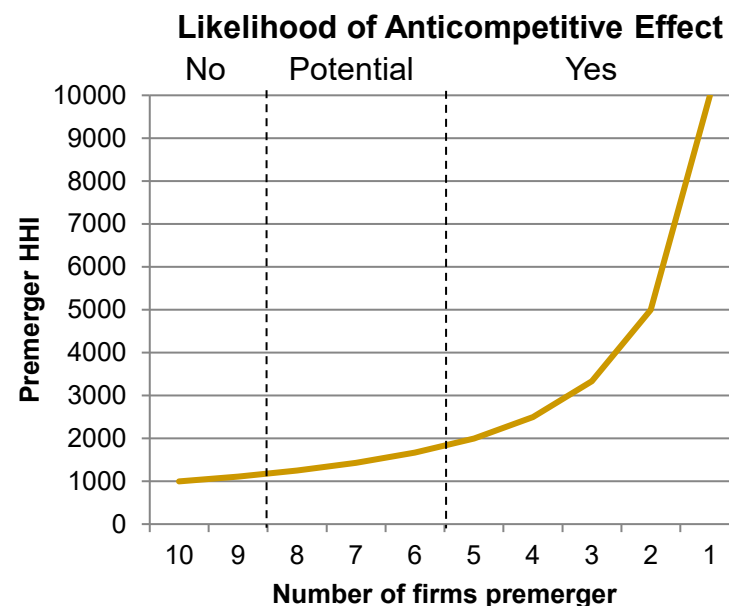
■ Math notes

- Calculation of the HHI with n firms in the market, with firm i having a market share of s_i :

$$HHI = \sum_{i=1}^n s_i^2$$

- Shares and HHIs in symmetrical markets with n identical firms premerger:

n	s_i	Premmerger HHI	Delta	Postmerger HHI	Exceeds 2010 Guidelines
10	10.0	1000	200	1200	No
9	11.1	1111	247	1358	No
8	12.5	1250	313	1563	Potential
7	14.3	1429	408	1837	Potential
6	16.7	1667	556	2222	Potential
5	20.0	2000	800	2800	Yes
4	25.0	2500	1250	3750	Yes
3	33.3	3333	2222	5556	Yes
2	50.0	5000	5000	10000	Yes
1	100.0	10000			



HHIs in Successful DOJ/FTC Challenges

- The DOJ and FTC have not brought “close” cases in alleged markets

Agency	Complaint	Defendant	Combined share ¹	PreHHI	PostHHI	Delta	Deal Status
FTC	2020	Hackensack	≈50	1994	2835	841	Preclosing
FTC	2020	Peabody Energy	68	2707	4965	2258	Preclosing
FTC	2018	Wilhelmsen	84.7	3651	7214	3563	Preclosing
FTC	2017	Sanford Health	98.6 ²	5333	9726	4393	Preclosing
DOJ	2017	Energy Solutions	100	6040	10000	3960	Preclosing
DOJ	2016	Anthem	47	2463	3000	537	Preclosing
DOJ	2016	Aetna			>5000 ³		Preclosing
FTC	2016	Penn State Hershey	64	3402	5984	2582	Preclosing
FTC	2015	Advocate Heath	55	2094	3517	1423	Preclosing
FTC	2015	Staples	75 ⁴	3036	5836	2800	Preclosing
FTC	2015	Sysco	71 ⁵	3153	5519	1966	Preclosing

¹ When the complaint alleged multiple markets, the market with the most problematic highest HHIs is reported.

² Pediatricians market. The FTC alleged three other physician markets. The lowest problematic delta was in OB/GYN with a premerger HHI of 6211, a postmerger HHI of 7363, and a delta of 1152.

³ The DOJ challenged Aetna’s proposed acquisition of Humana in 17 geographic markets. The complaint did not provide HHI statistics for each market, although it noted that in 75% of the markets, the post-HHI would be greater than 5000.

⁴ The FTC also challenged the transaction in 32 alleged relevant local geographic markets, with the smallest combined share being 51% and the largest being 100%.

⁵ The complaint alleged multiple markets in food distribution. The numbers given are for national broadline distribution.

HHIs in Successful DOJ/FTC Challenges

- The DOJ and FTC have not brought “close” cases in alleged markets

Agency	Complaint	Defendant	Combined		PreHHI	PostHHI	Delta	Deal Status
			Share ¹					
DOJ	2015	Electrolux			3350 ²	5100	1750	Preclosing
DOJ	2013	Bazaarvoice	68		2674	3915	1241	Consummated
FTC	2013	Saint Alphonsus	57		4612	6129	1607	Consummated
DOJ	2013	US Airways	100 ³		5258	10000	4752	Preclosing
DOJ	2013	ABInbev	100		5114	10000	4886	Preclosing
FTC	2011	OSF Healthcare	59		3422	5179	1767	Preclosing
FTC	2011	ProMedica	58		3313	4391	1078	Preclosing
DOJ	2011	H&R Block	28		4291	4691	400	Preclosing
FTC	2009	CCC	65		4900	5460	545	Preclosing
FTC	2008	Polypore	100		8367	10000	1633	Consummated
FTC	2007	Whole Foods	100 ⁴			10000		Preclosing
FTC	2004	Evanston	35		2355	2739	384	Consummated
DOJ	2003	UPM-Kemmene	20		2800	2990	190	Preclosing

¹ When the complaint alleged multiple markets, the market with the most problematic highest HHIs is reported.

² The complaint alleged three markets. The numbers given are for ranges. Cooktops and wall ovens were similar

³ The complaint alleged 1043 markets.

⁴ In some local geographic markets, this was a merger to monopoly in the FTC’s alleged product market of premium, natural, and organic supermarkets.

HHIs in Successful DOJ/FTC Challenges

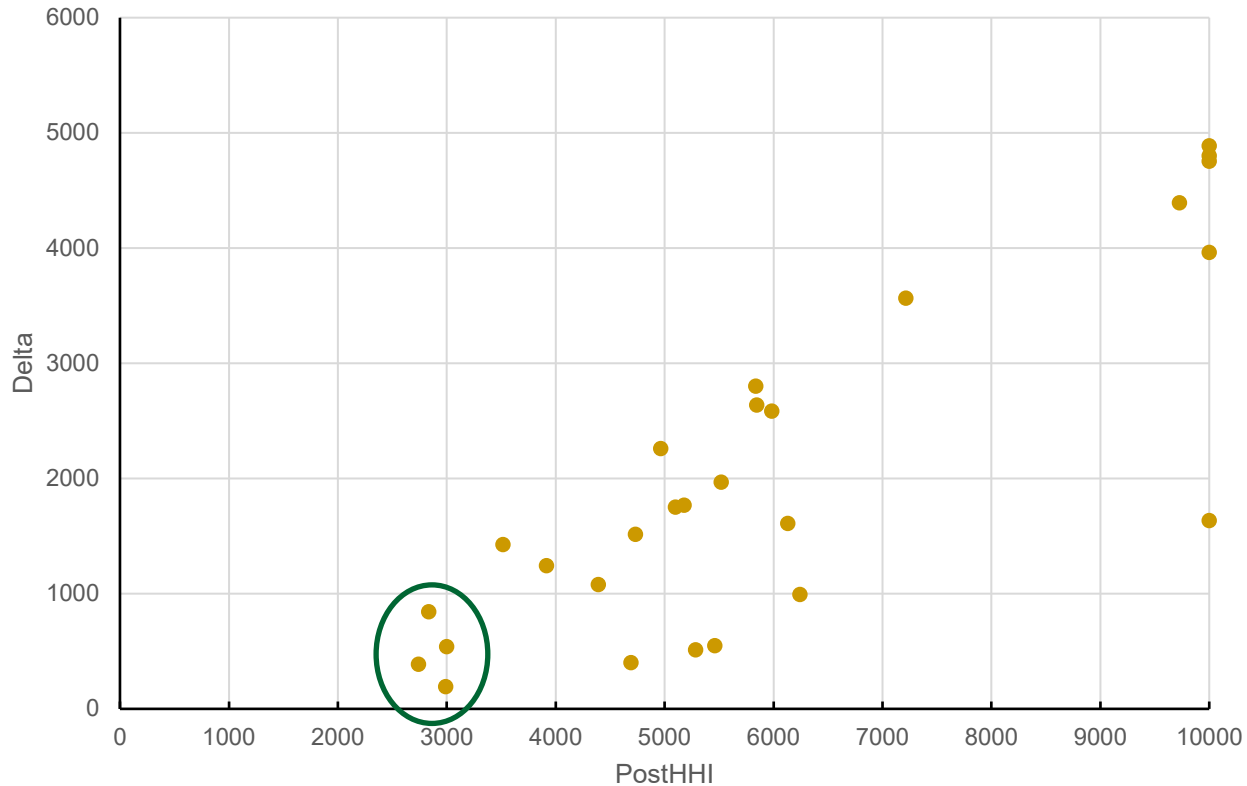
- The DOJ and FTC have not brought “close” cases in alleged markets

Agency	Complaint	Defendant	Combined		PreHHI	PostHHI	Delta	Deal Status
			Share ¹					
FTC	2002	Libbey	79		5251	6241	990	Preclosing
FTC	2001	Chicago Bridge	73		3210	5845	2635	Consummated
FTC	2000	Heinz	33		4775	5285	510	Preclosing
FTC	2000	Swedish Match	60		3219	4733	1514	Preclosing
DOJ	2000	Franklin Electric	100		5200	10000	4800	Preclosing

¹ When the complaint alleged multiple markets, the market with the most problematic highest HHIs is reported.

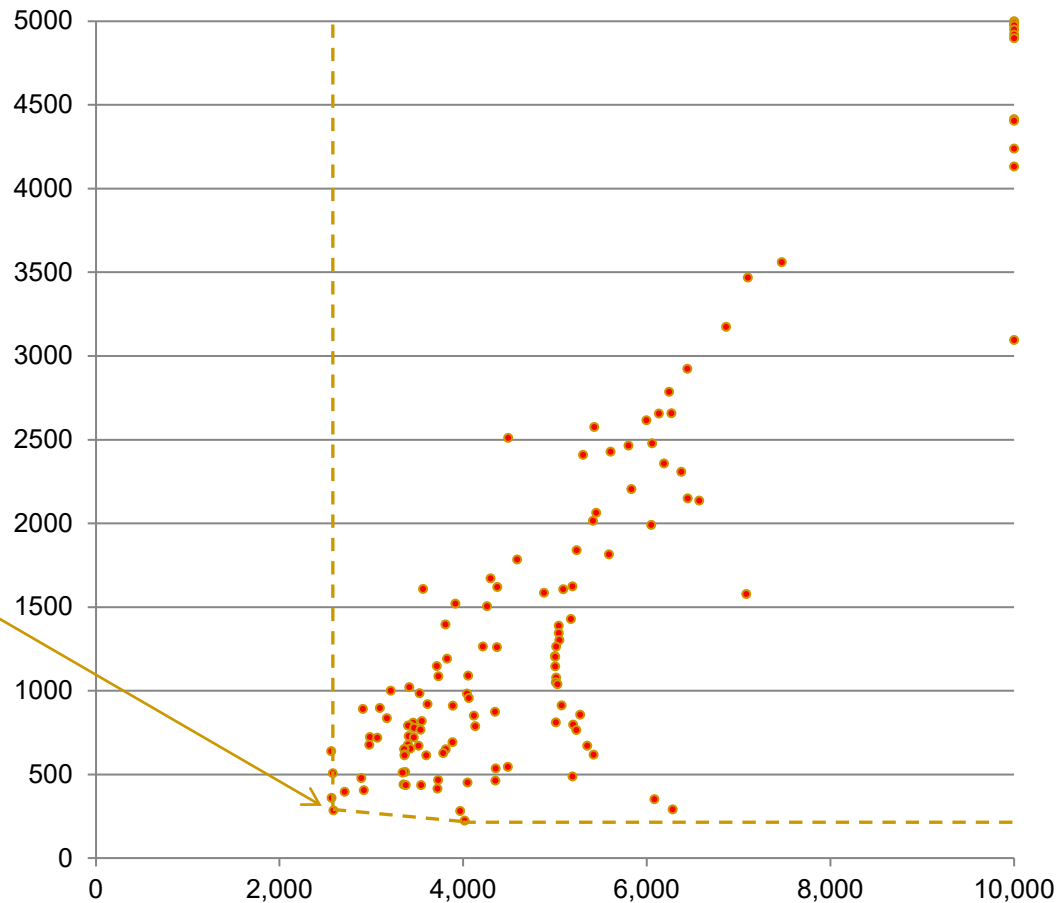
HHIs in Successful DOJ/FTC Challenges

**PostHHI-Delta Pairs in
Successful DOJ/FTC Litigations**



Example: Albertsons/Safeway

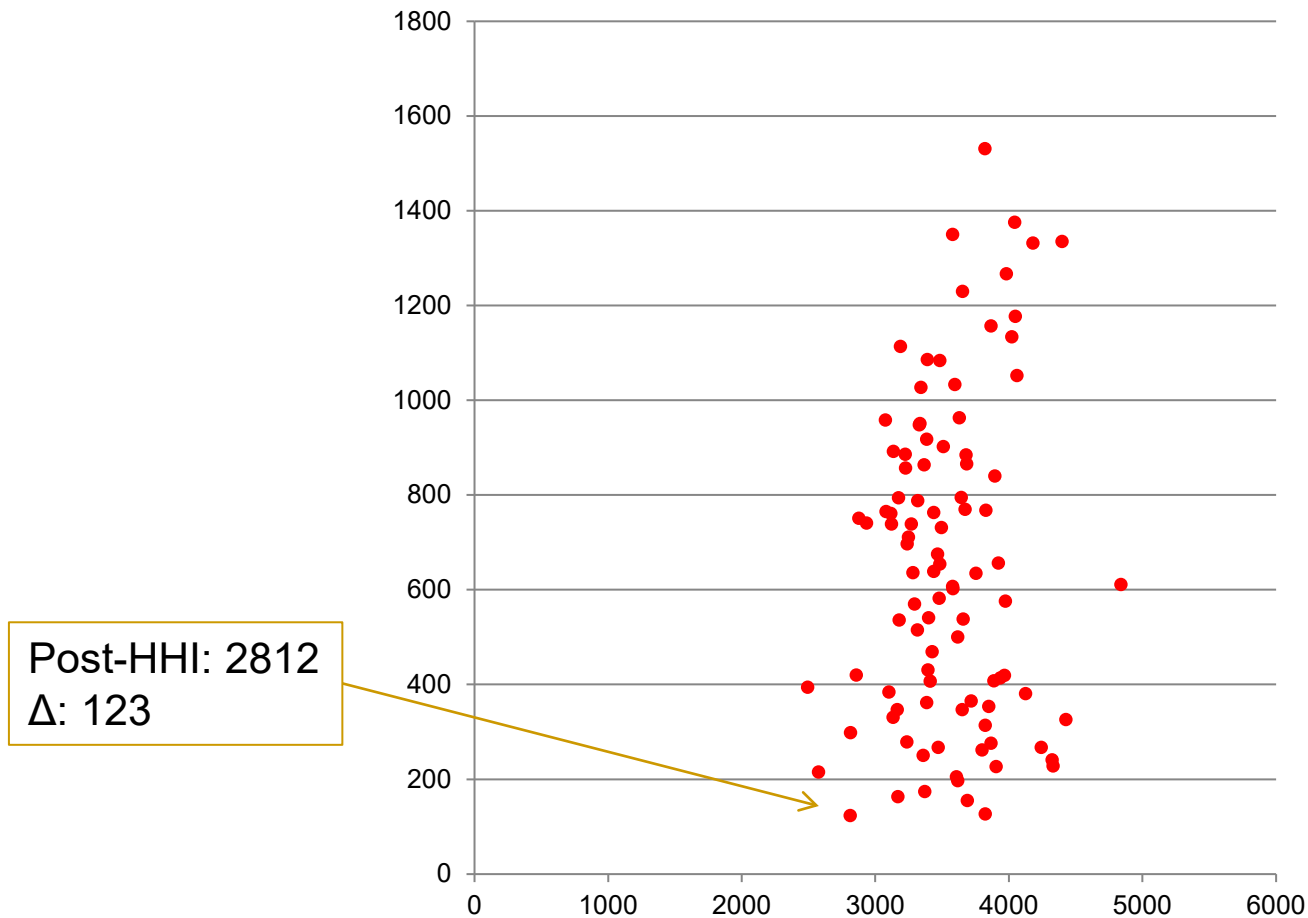
Albertsons/Safeway
Post-HHI/ Δ : All Challenged Markets



6 to 5	5
5 to 4	27
4 to 3	43
3 to 2	42
2 to 1	13
	<hr/>
	130

Example: AT&T/T-Mobile

AT&T/T-Mobile
Post-HHI/ Δ : All Challenged Markets



Market participants¹

■ The idea

- Under the Merger Guidelines, only demand-side substitutability counts in market definition
- BUT who participates in the market—and their associated market shares—does take supply-side substitutability into account

Note: Historical precedent allows courts to take supply-side substitutability into account when defining markets

¹ See 2010 Merger Guidelines § 5.1.

Identifying market participants

- Two types of market participants under the Merger Guidelines
 1. Current sellers: All firms that currently earn revenues in the relevant market
 2. Nonsellers (“rapid entrants”):
 - a. Vertically integrated firms to the extent that they would direct production from captive use to merchant sales or employ excess capacity in response to a SSNIP
 - b. Firms not currently earning revenues in the relevant market but will enter the market with near certainty in the very near future
 - c. Firms that are not current producers in a relevant market but would very likely provide a rapid supply response to a SSNIP

Identifying market participants

■ Nonseller “rapid entrants”

- The 2010 Merger Guidelines limit “rapid entrants” to those firms whose entry do not require significant sunk costs

- The 1992 Guidelines called these firms “uncommitted entrants”¹

- *Example:*

Farm A grows tomatoes halfway between Cities X and Y. Currently, it ships its tomatoes to City X because prices there are two percent higher. Previously it has varied the destination of its shipments in response to small price variations. Farm A would likely be a rapid entrant participant in a market for tomatoes in City Y.²

- NB: Entry that would take place more slowly in response to adverse competitive effects, or that requires firms to incur significant sunk costs, is considered in the entry defense analysis, not as market participation

¹ See 1992 Merger Guidelines § 1.32.

² 2010 Merger Guidelines § 5.1 (example 16).

Market share attribution¹

1. Current sellers

- Normally based on recent historical level of sales
 - Homogeneous products are usually measured in units
 - Reflects Cournot competition, where production levels are the firm's control variable
 - Differentiated products are usually measured in revenues
 - Reflects Bertrand competition, where price is the firm's control variable
- Adjustments
 - The Merger Guidelines envision adjustments to historical measures based on changed conditions when these adjustments can be reliably made
 - *Example:*
 - Firm A, which operates close to full capacity, has just developed a new technology, which will enable it to increase production by 20%.
 - For HHI analysis, increase Firm A's production by 20% and recalculate the market shares of all firms in the relevant market
 - *Example:*
 - One of Firm B's plants was recently destroyed by a fire, which will reduce the firm's production levels in the future
 - For the HHI analysis, reduce Firm B's production by the amount produced by the destroyed plant (and not shifted to another of B's plants with excess capacity) and recalculate the market shares of all firms in the relevant market

¹ See 2010 Merger Guidelines § 5.2.

Market share attribution¹

2. Nonsellers

- The competitive significance of nonsellers depends on the extent to which they would rapidly enter the relevant market in response to a SSNIP
- Consequently, their market share attribution is the quantity they would likely sell in the relevant market in response to a SSNIP
 - The 1992 Merger Guidelines are explicit on this¹
 - The 2010 Merger Guidelines are silent on the mechanism to attribute market shares
- Example
 - If Firm X currently produces 1 million units of an input and consumes 100% of this production internally, but would divert 20% of its production to merchant sales in the event of a 5% SSNIP, then the integrated firm is a participant in the relevant market and would be credited with 200,000 units in the relevant market (even though the firm in fact makes no sales in the relevant market).

Current Producers			MG Participants		
	Units	Share		Units	Share
Firm A	600	37.5%	Firm A	600	33.3%
Firm B	450	28.1%	Firm B	450	25.0%
Firm C	400	25.0%	Firm C	400	22.2%
Firm D	150	9.4%	Firm D	150	8.3%
			Firm X	200	11.1%
	1600	100.0%		1800	100.0%

¹ 1992 Merger Guidelines § 1.41.

Defendants' Rebuttal Arguments

Defendants' rebuttal arguments

■ *Baker Hughes*

The basic outline of a section 7 horizontal acquisition case is familiar. [1] By showing that a transaction will lead to undue concentration in the market for a particular product in a particular geographic area, the government establishes a presumption that the transaction will substantially lessen competition. **[2] The burden of producing evidence to rebut this presumption then shifts to the defendant.** [3] If the defendant successfully rebuts the presumption, the burden of producing additional evidence of anticompetitive effect shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times.¹

- In Step 2 of *Baker Hughes* three-step burden shifting, the defendant bears the burden of production to rebut the plaintiff's prima facie case
 - The burden of production requires the defendant to adduce sufficient evidence to put the prima facie case in issue and create a question of fact for the trier of fact
 - The quantum of evidence required depends on the strength of the plaintiff's prima facie case: "The more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully."²

¹ United States v. Baker Hughes Inc., 908 F.2d 981, 982-83 (D.C. Cir. 1990) (footnote and internal citations omitted).

² *Id.* at 991.

Typical structure of a formal merger analysis

■ Step 1: The prima facie case

□ Relevant market

- *Brown Shoe* “outer boundaries” and “practical indicia” tests for product markets
- “Commercial realities” test for geographic market
- Merger Guidelines hypothetical monopolist test

□ *PNB* presumption

- Market participants and market shares
- Application of the *PNB* presumption

□ Other evidence of anticompetitive effect

- Unilateral effects
- Coordinated effects
- Elimination of a maverick

H&R Block

```
graph LR; A[Unilateral effects  
Coordinated effects  
Elimination of a maverick] --> B[H&R Block]; B --> C[Traditional defenses (offsetting downward pricing pressure)]
```

■ Step 2: Defendants’ rebuttal

□ Challenges to the prima facie case (failure of proof on upward pressing pressure)¹

□ Traditional defenses (offsetting downward pricing pressure)

- Entry/expansion/repositioning
- Efficiencies
- Countervailing buyer power (“power buyers”)
- Failing company/division

■ Step 3: Balancing

¹ Often addressed in Step 1.

Defendants' rebuttal arguments

- Note on opinion's structure:
 - The H&R Block/TaxACT court concluded its analysis of the DOJ's prima facie case with nothing more than the *PNB* presumption
 - It did not go on, as does the 2010 DOJ/FTC Horizontal Merger Guidelines, and look at other evidence the DOJ presented to bolster the *PNB* presumption
 - Rather:
 - The court flipped the express theory and supporting evidence of anticompetitive harm into the second stage of the *Baker Hughes* burden-shifting paradigm, *and*
 - Placed the burden on the defendants of going forward with evidence showing that the coordinated effects and unilateral theories of anticompetitive harm do *not* apply in the case
 - Still, the burden on the defendants was one only of production: the burden of persuasion remained on the plaintiffs in Step 3
 - Most subsequent opinions have placed the analysis of coordinated and unilateral effects after the *PNB* presumption in the section analyzing the DOJ's prima facie case (i.e., in the first stage of *Baker Hughes*)

Defendants' rebuttal arguments

■ Four arguments

1. The likelihood of expansion by existing DDIY firms besides Intuit, HRB, and TaxACT will offset any anticompetitive effects
2. The relevant market is not susceptible to coordination and the merger will not increase the probability of effective coordinated interaction
3. The merger will not result in anticompetitive unilateral effects
4. The efficiencies resulting from the merger will offset any anticompetitive effects

Defendants' Rebuttal Arguments

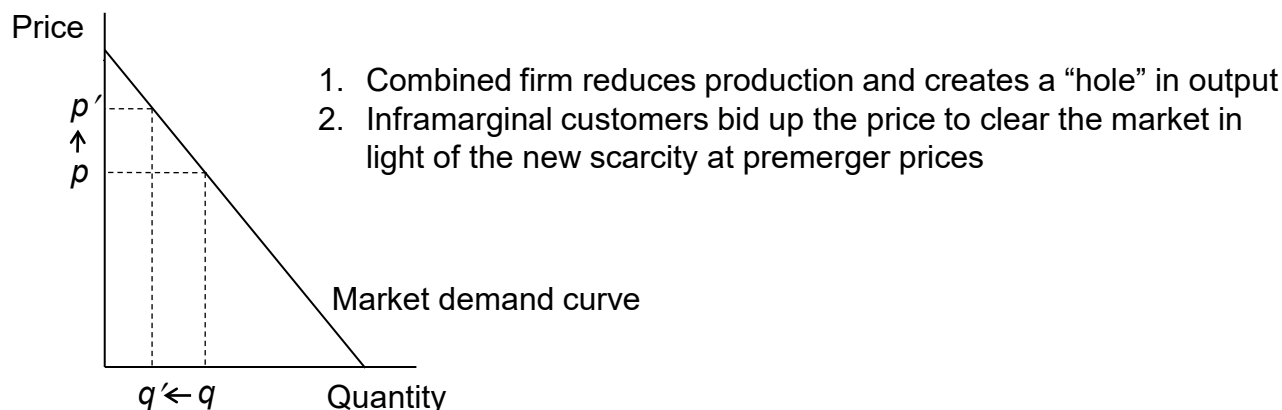
Part 1. Entry/Expansion/Repositioning

Entry/Expansion/Repositioning

■ The story

□ General idea

- Think of a merger's anticompetitive effect being achieved by a reduction in market output



- The defense depends on showing that the “hole” in output will be filled by—
 1. New firms entering the market and adding new output (“entry”)
 2. Incumbent firms expanding their output over premerger levels (“expansion”), or
 3. Incumbent firms extending or repositioning their production in product or geographic space to replace output losses resulting from unilateral effects (“repositioning”)

Entry/Expansion/Repositioning

■ The story

- Proof of likely actual postmerger entry/expansion/repositioning is not necessary to make out the defense
- The mere *threat* of entry/expansion/repositioning may be enough to deter the combined firm from acting less competitively for fear of inducing new competition
 - The “story”
 - Say that there are four firms in the market of equal size (each selling 100 units = 25% shares)
 - Two firms merge: Proforma market share = 50%
 - Combined firm decreases output by 40 units to raise prices (anticompetitive effect)
 - Suppose a new firm quickly enters selling 40 units (fills the “hole”)
 - Market returns to premerger prices
 - New entrant remains in the market with some positive market share of, say, 30%
 - Combined firm only recovers to a 20% share
 - → Merged firm has lost 5% points of share with no gain in price

Conclusion: If the merged firm could anticipate the new firm's entry and the post-entry market reequilibration, it would not have reduced output in the first instance

Entry/Expansion/Repositioning

- The Merger Guidelines: The formalities
 - 1982 and 1992: Depended largely on actual entry offsetting the merger's anticompetitive effect within two years of the merger
 - This allowed for a short-run anticompetitive effect
 - 2010: Requires entry to “deter or counteract” any anticompetitive effects “so the merger will not substantially harm customers”
 - Does not allow any grace period

Entry/Expansion/Repositioning

■ Guidelines requirements—Entry must be:¹

□ Timely

[E]ntry must be rapid enough to make unprofitable overall the actions causing those effects and thus leading to entry, even though those actions would be profitable until entry takes effect.

□ Likely

Entry is likely if it would be profitable, accounting for the assets, capabilities, and capital needed and the risks involved, including the need for the entrant to incur costs that would not be recovered if the entrant later exits.

□ Sufficient

Entry by a single firm that will replicate at least the scale and strength of one of the merging firms is sufficient. Entry by one or more firms operating at a smaller scale may be sufficient if such firms are not at a significant competitive disadvantage.

■ Courts have adopted these requirements

¹ References to entry in this section also include expansion and repositioning.

Entry/Expansion/Repositioning

- Defendants' argument
 - 18 companies offering DDIY products
 - Argued that the two largest— TaxHawk and TaxSlayer—were poised to replicate the scale and strength of TaxACT

Entry/Expansion/Repositioning

■ TaxHawk—

- Had infrastructure to expand by 5-7 times current size
- BUT had been in business for 10 years and never grew beyond 3.2%
- Functionally more limited than the Big Three
 - Does not service all federal tax forms
 - Excludes two states' forms in their entirety
 - Does not service major cities with income taxes (e.g., NYC)
- Co-founder testified that it would take another decade for the TaxHawk to support all forms
 - Reason: “Lifestyle” company—don’t like to work too hard
 - Runs TaxACT to “deliver a sufficient income stream to sustain its owners' comfortable lifestyle, without requiring maximal effort on their part.”
- Court: Compare with TaxACT—very entrepreneurial and impressive rate of growth
 - Citing to Dunn’s testimony

Illustrates the problem that the most compelling evidence is not under the control of the merging firms. Testimony by the alleged new entrant that it will not enter/expand/reposition sufficient to offset the anticompetitive effect is the kiss of death for the defense

Entry/Expansion/Repositioning

■ TaxSlayer—

- ❑ Established in 2003
- ❑ Family business
- ❑ Relies heavily on sponsorship of sporting events (e.g., the Gator Bowl and NASCAR races)
- ❑ 2.7 market share
- ❑ No meaningful growth in market share (had 2.5 share in 2006)

Entry/Expansion/Repositioning

- DOJ evidence: Significant barriers to entry and expansion
 - Successful entry/expansion beyond a few percentage points of markets share requires a brand name reputation
 - Customers need trust in their tax service provider
 - Costly to build needed reputation
 - HRB testimony: takes millions of dollars and lots of time to develop a brand
 - Big Three (really Big Two) spend over \$100 million/year in advertising to build and maintain their brands
 - Dwarf expenditures by smaller companies
 - TaxACT CIM identifies reputation as a barrier to entry
 - TaxHawk and TaxSlayer lack the reputation and the incentive and funds to build one
 - High new customer acquisition costs
 - Market has matured considerably and there is not the “low hanging fruit” of manual customers who are natural customers of DDIY products
 - Instead, TaxHawk or TaxSlayer would have to acquire customers from Intuit or HRB
 - Very high customer acquisition costs → entrenched market shares → low growth for other firms
 - High switching costs
 - Data cannot be imported across products of different companies
- Court: Defense rejected

Entry/Expansion/Repositioning

■ Concluding comments

- Almost impossible to make out the defense in an agency investigation
 - The agency starts by insisting that the potential entrants be identified by name
 - It then calls each of the identified firms and asks: “Would you enter this market if prices increased by 5% to 10%?”
 - The company almost always answers “no”
 - Can be a kneejerk reaction
 - Can be a “go away stuff” reaction
 - Can be an informed “no”
- Some business realities
 - As a general rule of business behavior, firms do not enter existing markets just for margin
 - They almost always require some nonprice competitive advantage against incumbent firms to cause them to entry
 - The problem is that entry can too easily precipitate a price war and destroy the pre-entry margin that made entry attractive in the first instance

Defendants' Rebuttal Arguments

Part 2A. Coordinated Effects

Introduction

■ Definition

- Coordinated effects (or coordinated interaction) is a theory of anticompetitive harm that depends on the merger making oligopolistic interdependence more effective:

Merger law “rests upon the theory that, where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding in order to restrict output and achieve profits above competitive levels.”¹

- *Terminology*: May use “accommodate” rather than “coordinate” or “cooperate”

■ What can firms do if the merged firm seeks to increase price?

1. “Do nothing”—Just continue doing what they were doing
2. Compete more aggressively/expand production/maybe even lower price to gain market share
3. “Accommodate” the price increase: Need not match it

Not necessary for all firms in the market to coordinate. All that is required is that the “collusive group” control enough share in the market to be able to affect market price.

¹ FTC v. CCC Holdings Inc., 605 F. Supp. 2d 26, 60 (D.D.C. 2009); accord United States v. H&R Block, Inc., 833 F. Supp. 2d 36, 77 (D.D.C. 2011).

Merger Guidelines history

- 1982 Guidelines

- Accepted an unspecified theory of oligopoly as the underpinning of the *PNB* presumption
- Did not require more for a prima facie case

Merger Guidelines history

■ 1992 Guidelines

- *Problem:* There exist highly competitive markets with only a few firms
 - E.g., Coke and Pepsi
- *Solution:* Require proof that the “Stigler conditions” for (tacit) coordination were satisfied in the relevant market:

Stigler conditions

1. *Tacit agreement:* Market conditions must be conducive to firms (tacitly) reaching terms of coordination that are individually profitable to the firms involved
2. *Detection:* Market conditions must be conducive to firms detecting deviations from the tacit terms of coordination
3. *Punishment:* Market conditions must be conducive to firms punishing deviations from the tacit terms of coordination

- *In practice:*
 - The courts—and, indeed, many within the agencies—did not understand the punishment requirement
 - Many thought that it require participating firms to tacitly reach an agreement on a particular punishment and then tacitly coordinate to implement it
 - Prosecutors had a difficult time convincing courts to accept proof that market conditions were conducive to punishing deviations and the theory grew out of favor

Merger Guidelines history

■ 2010 Merger Guidelines

- The 2010 Merger Guidelines sought to revitalize the coordinated effects theory

- *Solution*: Eliminate the language of the Stigler conditions and focus more generally and less prescriptively on—

- 2010 MG requirements
- 1. The premerger *susceptibility* of coordinated interaction, and
 - 2. The *effectiveness* of the merger in increasing the probability of effective coordinated interaction among some or all of the firms in the market
 - Requires a causal relationship between the merger and the increased probability of effectiveness of coordination
- Relation to the Stigler conditions

- The 2010 susceptibility requirement subsumed the structural market, information, and incentive compatibility considerations inherent in the first two Stigler conditions
- The Stigler punishment element disappeared altogether as a factor in the analysis and was replaced by the effectiveness condition
- Effectiveness only requires a showing of an increased likelihood of successful coordination interaction, not proof that coordination interaction would in fact occur postmerger

Let's look at the susceptibility and effectiveness requirements under the 2010 Merger Guidelines

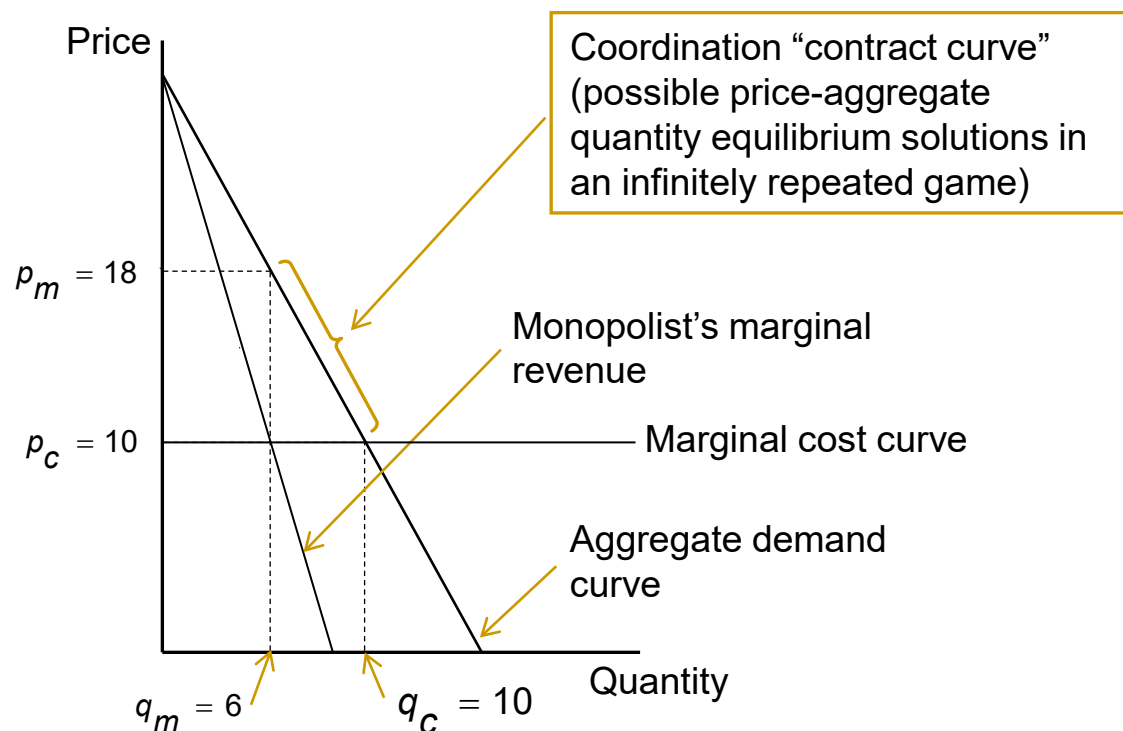
Susceptibility

- Oligopolistic coordination is impeded by three problems:
 1. Selection problem
 - Will the firms be able to “agree” to the price or other terms on which they will tacitly coordinate?
 2. Internal stability problem
 - Will the (short-run) incentive to pursue a more competitively aggressive strategy, which all profit-maximizing firms have, undermine any tacit coordination?
 3. External interference problem
 - Apart from the firms in the market, will other entities disrupt any tacit coordination?
 - Firms outside of the market that enter or threaten to enter the market
 - Buyers with the negotiating power to induce defections and disrupt the terms of coordination

1. Susceptibility: Selection problem

■ The idea

- There are an infinite number of possible price-quantity points on the demand curve on which the firms could tacitly “select” to achieve
- Ineffectiveness or instability occurs if they cannot coordinate on the same point



1. Susceptibility: Selection problem

- Factors to consider (not exhaustive)
 - a. The ability of the firms to signal one another about their individually preferred outcomes
 - b. The degree of firm homogeneity
 - The more similar the firms, the more likely they will have similar objectives and so be aligned incentives
 - Attributes to consider
 - Margins
 - Capacities
 - Excess capacity
 - Degree of vertical integration
 - c. The degree of product homogeneity
 - The more similar the products, the easier it is to coordinate on them
 - Attributes to consider—
 - Prices
 - Product characteristics

1. Susceptibility: Internal stability

- Incentive compatibility problem
 - Inherent in oligopolistic coordination since each profit-maximizing firm has a incentive to compete more aggressively and steal market share rather than to cooperate
- *Illustration:* Duopoly “prisoner’s dilemma” in single period game
 - Two symmetrical firms

		Firm 2		
		“Cooperate”	Compete	
Firm 1	“Cooperate”	45, 45	0, 50	<div>Firms split monopoly profits of 90</div>
	Compete	50, 0	25, 25	<div>Competitive firm takes total competitive profits of 50 against firm charging monopoly price</div> <div>Firms split competitive profits of 50</div>

Key result: Charging the competitive price is the *dominant strategy* for each firm, regardless of what strategy the other firm chooses. But mutual monopoly strategies earn each firm higher profits.

1. Susceptibility: Internal stability

- Two questions
 - a. What is the probability that at least one firm in the market will defect?
 - b. For any given firm, what factors influence its individual probability of defection?

1. Susceptibility: Internal stability

a. Probability of at least one defection

- ❑ *Key factor*: The number of competitors
 - The more competitors, the more likely one or more firms will defect given any individual firm's probability of defection
- ❑ Heuristic illustration
 - Say (quite unrealistically) that the probability of defection is p for each firm and independent of what the others do. Then the probability of at least one defection—
 - ❑ Increases with p
 - ❑ Increases with the number of firms n

This factor underpins the emphasis on the number of realistic suppliers remaining in the market postmerger

For later: Note the significant increase in the probability of at least one defection as the number of decrease (starting, say, at 5 firms)

Probability of at Least One Defection

		Individual defection probability p		
		10.0%	20.0%	30.0%
Number of firms n	2	19.0%	36.0%	51.0%
	3	27.1%	48.8%	65.7%
	4	34.4%	59.0%	76.0%
	5	41.0%	67.2%	83.2%
	6	46.9%	73.8%	88.2%
	7	52.2%	79.0%	91.8%
	8	57.0%	83.2%	94.2%
	9	61.3%	86.6%	96.0%
	10	65.1%	89.3%	97.2%

1. Susceptibility: Internal stability

b. Factors affecting an individual firm's incentive (probability) to defect (not exhaustive)

1. The expected rewards of defection

- The larger the expected reward relative to cooperation, the higher the probability of defection
- The expected reward is a function of the size of the reward and the probability of obtaining it

2. The size of the reward relative to the market (for a given probability of detection)

- The larger the size of the reward relative to the size of the market, the larger the probability of defection
 - *Example:* As the number of sales opportunities becomes smaller, the probability of defection increases
 - Large, “lumpy” sales or long-term contracts can make defection more profitable
 - *Example:* As individual sales become smaller relative to the market, the probability of defection decreases
- Differences among firms in the market may affect the size of their expected reward
 - *Example:* Firms with large excess capacity can increase their production to service more demand at more competitive (defection) prices
 - *Example:* Firms operating at capacity have no incentive to defect

1. Susceptibility: Internal stability

b. Factors affecting an individual firm's incentive (probability) to defect (not exhaustive)

3. The probability of detection (for a given size of reward)

- The greater the probability of detection, the lower the probability of defection
 - That is, the defecting firm will not be able to make as many sales before other companies respond
- Factors
 - The availability of key market information necessary to detect defections
 - E.g., market conditions, market prices, market volumes, transactions (seller, buyer, prices)
 - Lack of information may make defections from coordination harder to detect and therefore punish
 - Volatility of the market/predictability of demand
 - Volatility/unpredictability makes defections harder to detect

4. Lags in detection

- Significant lags makes cheating more profitable (can successfully cheat for a longer period of time)
- Factors
 - Same as for probability of detection

5. Prior actual or attempted collusion or coordination/willingness to coordinate

- Indicates that firms in the market believe that coordination is possible
- Premerger industry efforts to coordinate—whether or not successful—is highly probative

1. Susceptibility: External interference

- c. Threat of “external” interference that may undermine coordinated interaction within a relevant market
 - 1. Mechanisms of external interference
 - i. Producers outside of the market that enter the market
 - ii. Customers that switch to products outside of the market
 - iii. Customers with sufficient bargaining power to disrupt coordinated interaction
 - 2. External factors to consider (not exhaustive)
 - That is, factors external to the collusive group that may undermine the collusive group’s stability
 - These factors affect the elasticity of demand for the collusive group
 - i. Ability and willingness of customers to switch to suppliers outside of the collusive group
 - ii. Ease with which new competitors may enter
 - iii. Ease with which incumbent competitors outside the collusive group may efficiently expand production
 - iv. Capacity utilization outside the collusive group
 - Significant excess capacity allows outside firms to substantially increase their production levels to service demand diverting from the collusive group
 - v. Existence of disruptive “power buyers”

2. Merger effectiveness

■ Rule

- It is not enough that premerger the market is conducive to coordinated interaction—the merger *must reasonably increase the likelihood* that anticompetitive tacit coordination will be more likely or more successful postmerger

■ Implications

- This means that the merger must materially improve the incentives or ability of a group of firms sufficient to affect market price (the “collusive group”) to—
 1. Solve the section problem
 2. Solve the incentive incompatibility problem, *or*
 3. Resist external interference

2. Merger effectiveness

■ Some factors to consider when thinking about merger effectiveness

1. Mitigating the selection problem

- + The merger reduces firm or product heterogeneity in the market and better aligns the incentives of the various firms tacitly to achieve coordinated interaction

2. Mitigating the incentive incompatibility problem

- + + + The merger reduces the number of independent competitors in a way that materially increases the probability of detection, thereby increasing the probability of effective coordination
 - The magnitude of the HHI delta may be of probative significance here
- + + + The merger eliminates a disruptive “maverick” (considered as a separate theory below)
 - The merger decreases excess capacity inside the collusive group
 - The merger results in significant efficiencies in the combined firm that increase the rewards of defection, thereby decreasing the probability of effective coordination
 - The merger results in vertical integration that could improve the merged firm’s ability to cheat without detection, thereby increasing the probability of defection

3. Mitigating the external interference problem

- + + The merger eliminates a likely potential entrant, thereby increasing the probability of effective coordination
- + + The merger increases the barriers to entry/expansion/repositioning

Key:

- + The merger increases the probability of effective coordinated interaction postmerger
- The merger decreases the probability of effective coordinated interaction postmerger

Coordinated effects in *H&R Block*

- Coordinated effects in H&R Block

- Court:

Since the government has established its prima facie case, the burden is on the defendants to produce evidence of “structural market barriers to collusion” specific to this industry that would defeat the “ordinary presumption of collusion” that attaches to a merger in a highly concentrated market.¹

- This is consistent with a strict reading of *Baker Hughes* only if the plaintiffs have established a prima facie case of coordinated effects
- Almost all modern courts in their opinions treat coordinated effects as part of the discussion of the plaintiffs’ prima facie case
 - *Baker Hughes* is unique in its approach

¹ United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 77 (D.D.C. 2011) (quoting FTC v. H.J. Heinz Co., 246 F.3d 708, 725 (D.C. Cir. 2001)).

Coordinated effects in *H&R Block*

- Merging parties' arguments
 1. Intuit has no incentive to compete any less vigorously postmerger
 2. In particular, Intuit has no incentive to reduce competitiveness of its free product, since free products are a principal driver of paid new customers to Intuit
 3. Therefore, HRB must compete vigorously postmerger or else lose customers to Intuit

Coordinated effects in *H&R Block*

■ Evidence: Premerger susceptibility

1. Historical coordination

- After TaxACT introduced its free offering, Intuit proposed that firms lobby the IRS to impose limits on their free offerings (HRB and others joined, but not TaxACT)
- *Court*: “Highly persuasive historical act of cooperation”
- *WDC*: Shows that evidence does not have to be of historical illegal coordination

2. Other factors

- Market is transparent (consumer offerings; available on Internet)
- Can see price as well as attributes
- Product differentiation not that relevant
- Companies can observe and coordinate on attributes of “free” products
- Transactions are small, numerous, and spread among a mass of consumers
- Consumers have low bargaining power
- Barriers to switching due to “stickiness” of DDIY products (learning curve)

Coordinated effects in *H&R Block*

- Evidence: Increase in postmerger effectiveness
 1. *Contra*: Intuit engaged in “war games” designed to anticipate and defuse new competitive threats that might emerge from HRB postmerger
 2. BUT Intuit’s documents also indicated that it anticipated that the combined firm would likely “pull some of its punches” if Intuit is willing to go along and not compete aggressively against it
 - Anticipates that combined firm will “not escalate fee war”
 - NB: This could have been just a random observation by an Intuit employee and not Intuit’s considered strategy
 3. AND past cooperation as to lobbying the IRS for eligibility restrictions for free tax products probative of postmerger merger cooperation to further restrict eligibility
 4. AND merger would result in the elimination of a “particularly aggressive competitor” (TaxACT) in a highly concentrated market

Coordinated effects in *H&R Block*

■ Court

- Acknowledges that Intuit and the merged company will have strong incentives to compete for customers
- BUT coordination does not have to be on all dimensions of competition
 - One aspect is enough
 - For example, lower the quality of “free” products, causing marginal customers to switch to paid software → making them worse off
 - Here, DOJ alleges “coordination would likely take the form of mutual recognition that neither firm has an interest in an overall “race to free” in which high-quality tax preparation software is provided for free or very low prices.” (p. 77)
 - That is, not eliminate free products (useful as marketing devices)
 - Rather, reduce their quality in order to drive more customers into paid products
- Conclusion:
 - Defendants failed to rebut presumption that anticompetitive coordinated effects would result from the merger
 - To the contrary, the preponderance of the evidence indicates that coordinated effects likely would result

The practice today

■ Last choice as a theory

- Even after the 2010 revisions to the Merger Guidelines, coordinated effects is the last choice as a independent theory of competitive harm in horizontal merger investigations
- Given the narrow market definitions usually found under the hypothetical monopolist test:
 - In problematic mergers, the merging firms tend to have high market shares and be close competitors with one another
 - Typically yields an easily understood unilateral effects theory
- **Result:** Coordinated effects is rarely used in investigations or litigations as the primary theory of anticompetitive harm
 - Usually more of an add-on theory in the complaint
 - Or when the agency is forced into it (*CCC/Mitchell*)

The practice today

- When coordinated effects is used in litigation
 - A common approach is for the plaintiffs to invoke the *PNB* presumption and then make the argument that—
 1. The high concentration and other characteristics of the relevant market make it susceptible to coordinated interaction, *and*
 2. the reduction in the number of competitors and increase in concentration resulting from the merger is sufficient to increase the probability of coordinated interaction
 - This is essentially a return to the structure-conduct-performance argument
 - In some cases, however, the evidence may be more substantial
 - The agencies, for example, are looking more closely at significant reductions in excess capacity, especially in heavy industries where capacity expansions are costly and time-consuming, as making the market more conducive to coordinated interaction
 - NB: Consolidations of plants to reduce excess capacity is usually one of the common efficiencies cited by the parties in support of a deal

Anticompetitive Effects

Part 2B. Mavericks

Mavericks

■ General idea

- A “maverick” is a competitor that disrupts coordinated interaction among the other, more accommodating competitors that would occur in the absence of the maverick
- When an accommodating competitor acquires a maverick, the maverick’s disruptive conduct is suppressed and the market performs less competitively to the harm of consumers
- As a result, the acquisition of a maverick by an accommodating competitor is a special case of coordination interaction
 - Typically used to challenge deals where the target has a sufficiently small market share that the transaction would not otherwise raise major concerns

■ Example: Grupo Modelo in ABI/Grupo Modelo

- Unwilling to follow ABI’s price leadership
- Has caused ABI to price lower than it would have otherwise

Why are “mavericks” mavericks?

1. The most likely reason is idiosyncratic:

- The particular management of the firm simply believes that the firm will maximize its profits by being disruptive
- This may be the case when the management—
 - Refuses to pursue a more industry price-accommodating strategy¹
 - Pursues a long-run strategy of disruptive new product development or new marketing innovations²
- *Query*: Should a merger be prohibited simply because the current management—perhaps even just the current CEO—believes in being disruptive?

¹ See, e.g., Complaint, United States v. Anheuser-Busch InBev SA/NV, No. 1:13-cv-00127 (D.D.C. filed Jan. 31, 2013) (settled by consent decree).

² See, e.g., Complaint, United States v. AT&T Inc., No. 1:11-cv-1560 (D.D.C. filed Aug. 31, 2011) (challenging AT&T's pending acquisition of T-Mobile; complaint voluntarily dismissed when transaction was terminated).

Why are “mavericks” mavericks?

2. Another possible reason is that something inherent in the firm’s structure that makes it in the profit-maximizing interest of the firm to be disruptive regardless of the predilections of its management
 - This may be the case if the firm is a small but materially lower-cost producer than the larger, more established firms. In this case, the firm may wish to take advantage of its lower-cost structure to discount prices and gain market share.¹
 - More generally, smaller firms may have more of an incentive to be a maverick than larger firms, since they have—
 - proportionally less incumbent business at stake in the event that a maverick strategy does not work, *and*
 - proportionally more to gain in market share in the event that the strategy works

¹ See, e.g., *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36 (D.D.C. 2011) (noting government argument that TaxACT was a “maverick” because, among other things, it was a low-cost competitor that pursued an aggressive pricing policy).

Mavericks in *H&R Block*

■ Plaintiff's argument:

- TaxACT is a “maverick” that has disrupted tacit coordination that otherwise would have occurred in the DDIY market
 - Freemium business model
 - Bucked prevailing pricing norms by introducing free-for-all offer, which others matched
 - Remains the only competitor with significant market share that relies on free and low-cost high-quality products
 - TaxACT CEO appears dedicated to freemium strategy
 - NB: Note role of idiosyncratic management preferences
 - Had the effect in pushing industry toward lower pricing, even when the two major players were not anxious to follow
- The merger will eliminate TaxACT as a disruptive force, which high result in a higher level of coordinated interaction in the relevant market postmerger

Mavericks in *H&R Block*

■ Court:

- DOJ failed to provide clear standards for identifying a maverick
- But key question remains:

“Does TaxACT consistently play a role within the competitive structure of this market that constrains prices?”

- *Conclusion 1:* TaxACT play a special role in keeping the market competitive

The Court finds that TaxACT's competition does play a special role in this market that constrains prices. Not only did TaxACT buck prevailing pricing norms by introducing the free-for-all offer, which others later matched, it has remained the only competitor with significant market share to embrace a business strategy that relies primarily on offering high-quality, full-featured products for free with associated products at low prices.¹

¹ United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 80 (D.D.C. 2011).

Mavericks in *H&R Block*

■ Court

- *Conclusion 2*: The incentives of the merged firm to be disruptive will differ from those of TaxACT premerger

[T]he pricing incentives of the merged firm will differ from those of TaxACT pre-merger because the merged firm's opportunity cost for offering free or very low-priced products will increase as compared to TaxACT now. In other words, the merged firm will have a greater incentive to migrate customers into its higher-priced offerings—for example, by limiting the breadth of features available in the free or low-priced offerings or only offering innovative new features in the higher-priced products.¹

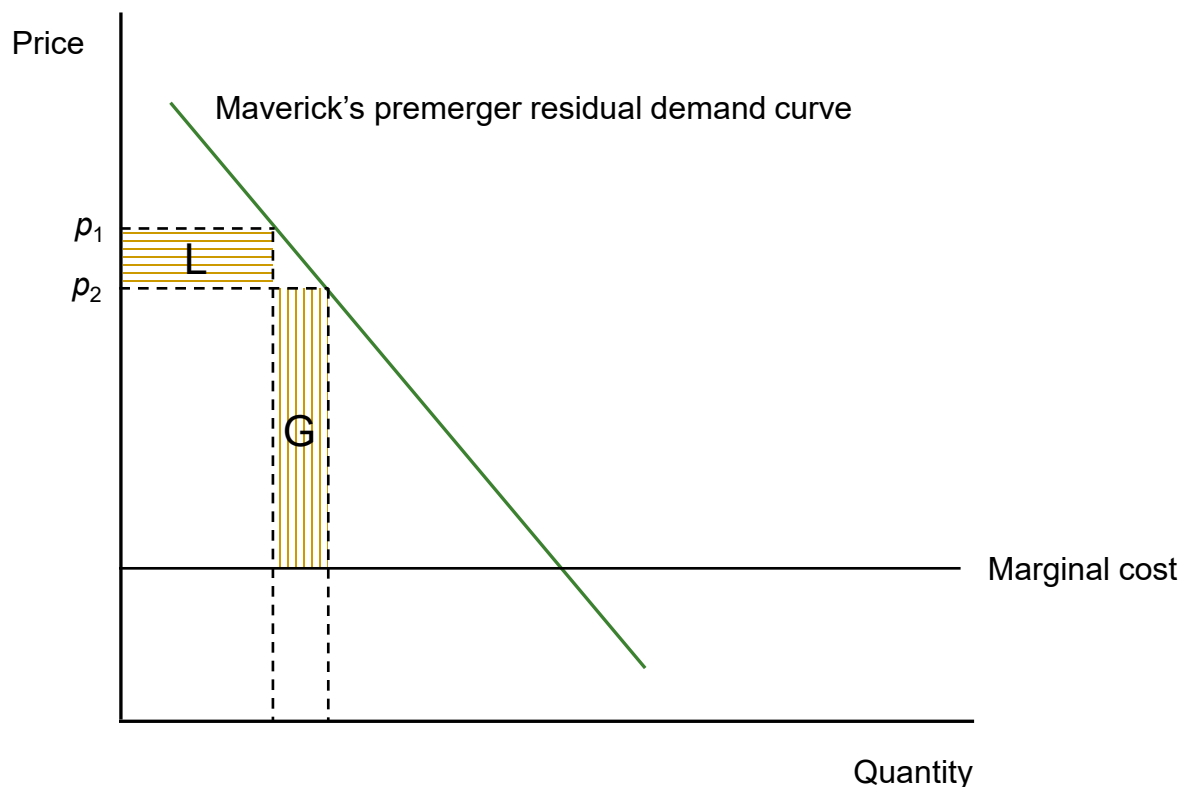
- Generally, a firm is less likely to be aggressive in pricing to increase its market share when as inframarginal sales become larger relative to marginal sales
 - In a single-price market, a price cut to increase sales requires the firm to reduce prices on all inframarginal sales
- So a merger between an established firm with a large share and a smaller “maverick” with a low market share is likely to decrease the incentive for the combined firm to be a maverick, even if the maverick’s management runs the combined firm

This change in incentives is illustrated on the next two slides

¹ United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 80 (D.D.C. 2011) (record citation omitted).

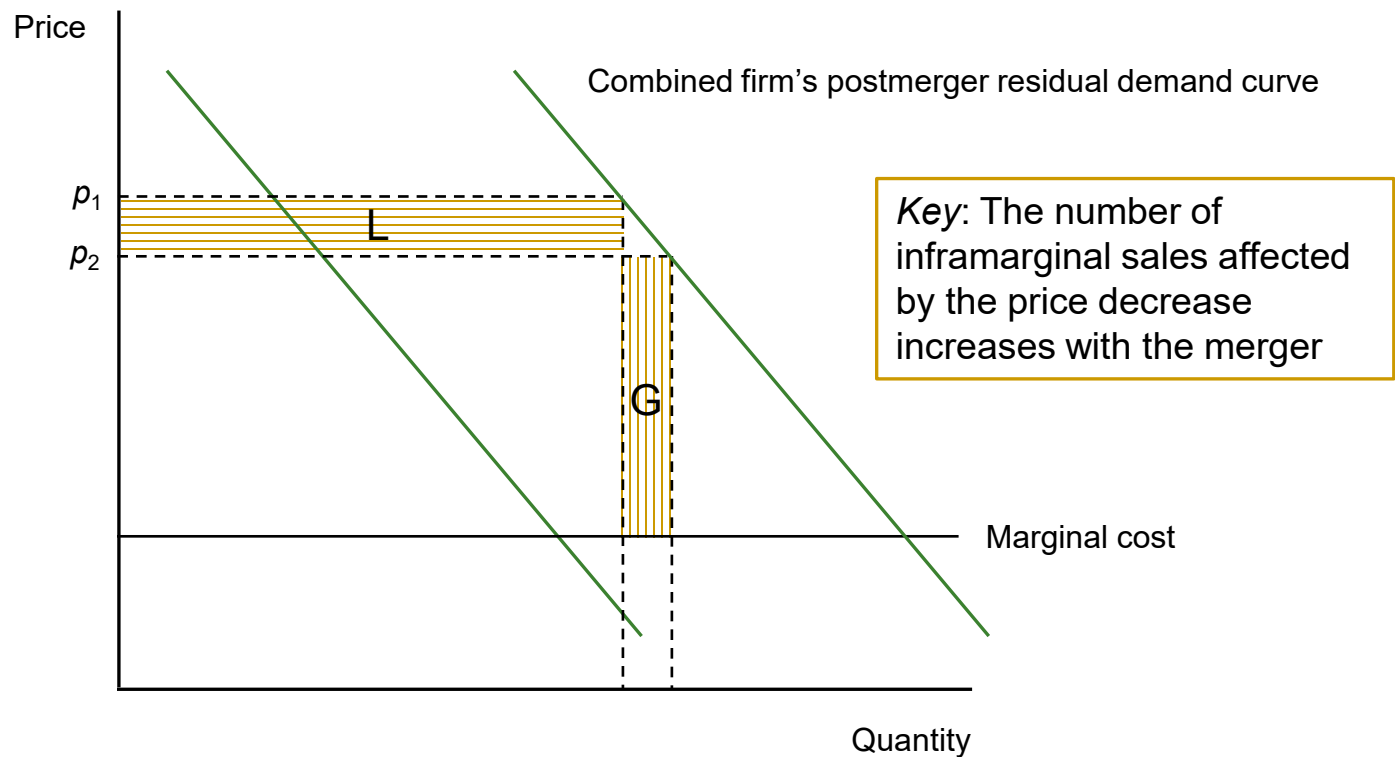
Mavericks–Postmerger incentives

- Premerger incentives to act aggressively
 - As illustrated in the diagram below, the “maverick” standing alone has an increase to lower price because the profit gains outweigh the losses



Mavericks–Postmerger incentives

- Postmerger disincentives to act aggressively
 - Postmerger, the combined firm has a greater sales volume and hence incurs greater losses than the maverick for a given price decrease
 - In the case illustrated in the diagram below, the combined firm does not have an incentive to lower price



Mavericks

■ Bottom line: Requirements of a “maverick” theory

- As *H&R Block/TaxACT* suggests, the following requirements should be imposed on a theory of anticompetitive harm based on eliminating a maverick:
 1. The market is conducive to a materially higher degree of coordinated interaction than it exhibits premerger;
 2. The disruptive conduct of the merger target is a material contributor to the inability of the market to achieve this higher degree of coordinated interaction;
 3. The acquisition of the merger target is likely to result in the discontinuance of the disruptive conduct; *and*
 - NB:* Sometimes the target management will become the management of the combined company, which raises the question of whether the disruptive activity will be discontinued.
 4. The discontinuance of the merger target’s disruptive activity is likely to result in a materially higher degree of coordinated interaction in the market to the harm of consumers
 - This requires that the target be unique or especially effective in its disruptive conduct

Mavericks

■ One final note

- Although in most applications of the theory the target is the maverick, in some cases the buyer may be the maverick
- The incentives argument is harder for the plaintiff in this situation, since the disruptive buyer's management will run the combined company
 - But they still face an incentive to be less of a maverick because of the effect on a larger number of inframarginal sales.

Anticompetitive Effects

Part 3. Unilateral Effects

Unilateral effects

■ Definition

- Unilateral effects is a theory of anticompetitive harm that goes to the elimination of significant “local” competition between the merging firms, so that the merged firm can raise prices independently of how other incumbent firms react

A merger is likely to have unilateral anticompetitive effect if the acquiring firm will have the incentive to raise prices or reduce quality after the acquisition, independent of competitive responses from other firms.¹

□ The idea

- An cognizable anticompetitive effect results if the merging firm increases the price of one of its products as a result of the merger even if no other firm in the market increases its price
- The concept of unilateral effects as a theory of merger anticompetitive harm was introduced in the 1992 DOJ/FTC Horizontal Merger Guidelines
- The theory has been accepted as valid under Section 7 by the courts

The underlying economics is similar to that of the one-SSNIP recapture test: Is a price increase for merging product A profitable postmerger because of the recapture of some lost sales by merging product B?

¹ United States v. H&R Block, Inc., 833 F. Supp. 2d 36, 81 (D.D.C. 2011).

Unilateral effects

- Example: Firm A increases prices (and decrease production)
 - This is more the story in which we are interested

Initial conditions

	p	c	$\$m$	q	Profits
Firm A	300	100	200	100	20000
Firm B	350	90	260	120	31200

Post-Price Increase

Firm A increases prices by: 30
 Firm A marginal (lost) sales: -15
 Diversion: A to B 60%
 Unit sales Firm A loses to Firm B: 9

	p	c	$\$m$	q	Profits	Profit change
Firm A	330	100	230	85	19550	-450
Firm B	350	90	260	129	33540	2340

When A is independent, the price increase is unprofitable

When A and B merge, the price increase is jointly profitable

Unilateral effects

■ Example 2: Firm A *increases* production (and *decreases* price)

□ Say for firm A:

- Inverse demand: $p = 300 - q$
- Fixed costs: $f = 0$
- Marginal costs: $mc = 20$
- Marginal revenue: $mr = 300 - 2q$

$$\begin{aligned} \text{FOC: } mr &= mc \\ 300 - 2q &= 20 \\ \text{So: } q^* &= 140 \\ p^* &= 160 \\ \$m_A &= 140 \end{aligned}$$

- Say when firm A increases its production by 1 unit (and lowers its price by \$1), 0.3 units that firm B would have sold now divert to Firm A ($D_{BA} = 0.3$)
- If firm B's margin is also 140 at its initial price level, then firm A's one-unit increase in production causes firm B to lose \$42 ($\Delta\pi_B = D_{BA} \times \$m_B = (0.3)(140) = \$42$).
 - That is, Firm A's conduct creates a *negative externality* for Firm B

- When A and B are independent firms, firm A does not care about firm B's loss
- But when firm A acquires firm B, firm A must take into account firm B's losses in firm A's marginal revenue:

$$\begin{aligned} mr_A^{\text{postmerger}} &= mr_A^{\text{premerger}} - D_{BA} \$m_B \\ &= 300 - 2q - 42 \end{aligned}$$

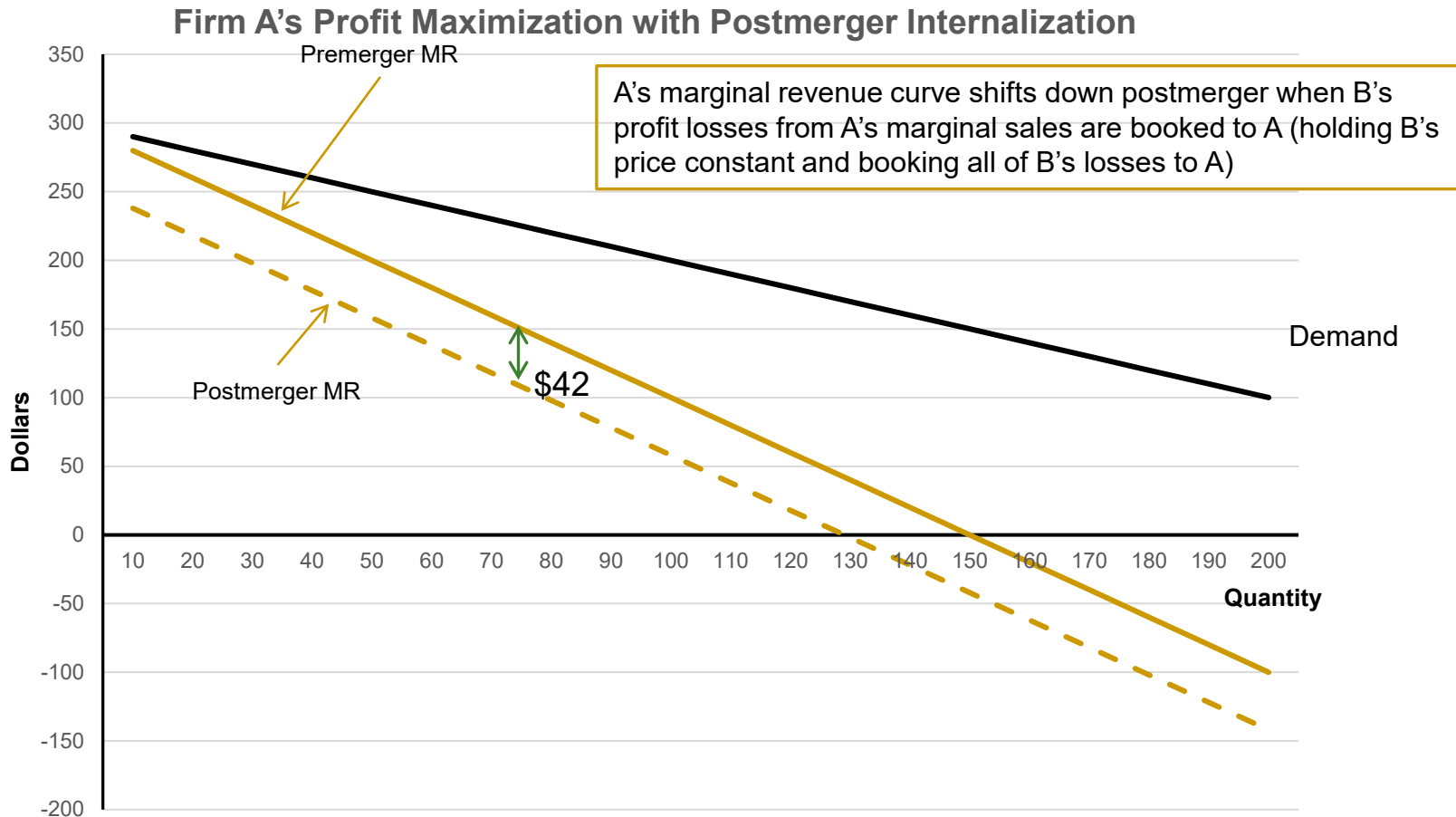
A's marginal negative externality imposed on B

This shifts firm A's marginal revenue curve down and makes firm A's marginal revenue less than its marginal cost at premerger prices. *Firm A must decrease output and increase price to reequilibrate marginal revenue and marginal cost: $q_{\text{postmerger}} = 119$; $p_{\text{postmerger}} = 181$*

Unilateral effects

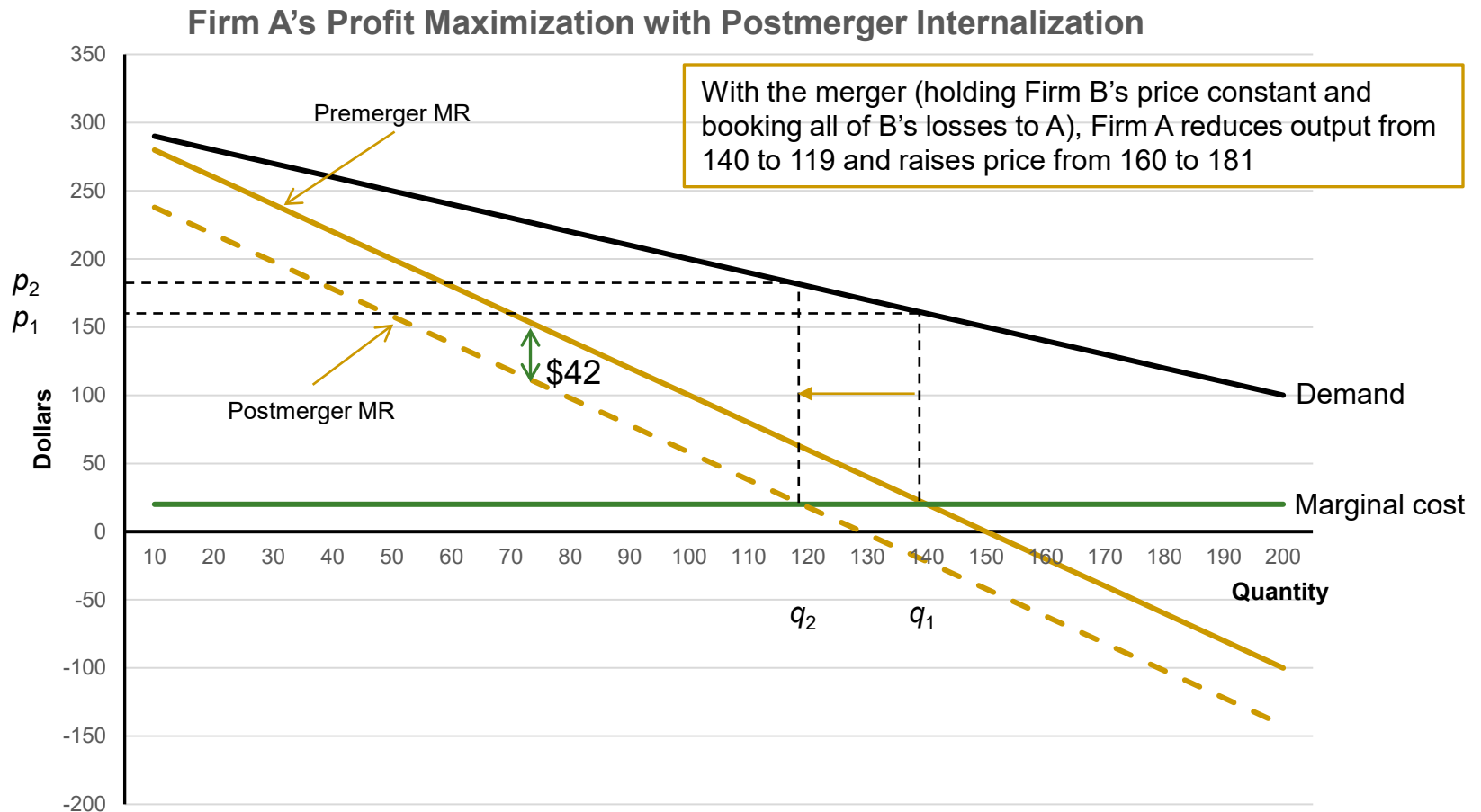
An easy way to visualize unilateral effects is to hold firm B's profits constant postmerger and book all of B's gains and losses from A's price changes to A.

■ Example 2 (con't)



Unilateral effects

■ Example 2 (con't)



Unilateral effects

- Why unilateral effects can be important (example)
 - Nestlé-Dreyer's in the super-premium segment of an all ice cream market

All Ice Cream ¹ (supermarket sales in 2002)			
	Sales	Share	HHI
Store brands (10)	\$997.2	23.0%	53
Dreyer's	\$795.4	18.4%	339
Breyer's	\$686.8	15.9%	253
Blue Bell	\$253.4	5.8%	34
Ben & Jerry's	\$199.8	4.6%	21
Nestlé	\$192.7	4.4%	19
Wells Dairy	\$136.9	3.2%	10
Armour Swift	\$106.7	2.5%	6
Turkey Hill	\$105.2	2.4%	6
Marigold Foods	\$88.2	2.0%	4
Others (10)	\$769.1	17.8%	32
	\$4,331.4	100.0%	776
Combined share		22.8%	
Premerger HHI			776
Delta			162
Post-merger			938

HHIs fall within a Merger Guidelines' "safe harbor"

But unilateral effects indicates that the merger may be a problem if the cross-elasticities/diversion ratios between Dreyer's and Nestlé's are:

1. High between the merging parties
2. Low with everyone else

Key: Unilateral effects create upward pricing pressure regardless of the market definition or the HHIs

¹ Sherri Day, *Nestlé and Dreyer's to Merge in \$2.4 Billion Deal, Creating Top U.S. Ice Cream Seller*, N.Y. Times, June 18, 2002

Unilateral effects

- But the DOJ avoided the use of unilateral effects by narrowly defining the market super-premium ice cream

All Ice Cream (1) (supermarket sales in 2002)			
	Sales	Share	HHI
Store brands (10)	\$997.2	23.0%	53
Dreyer's	\$795.4	18.4%	339
Breyer's	\$686.8	15.9%	253
Blue Bell	\$253.4	5.8%	34
Ben & Jerry's	\$199.8	4.6%	21
Nestle	\$192.7	4.4%	19
Wells Diary	\$136.9	3.2%	10
Armour Swift	\$106.7	2.5%	6
Turkey Hill	\$105.2	2.4%	6
Marigold Foods	\$88.2	2.0%	4
Others (10)	\$769.1	17.8%	32
	\$4,331.4	100.0%	776
Combined share		22.8%	
Premerger HHI			776
Delta			162
Post-merger			938

Super-Premium Ice Cream (2) (all channels)			
	Sales	Share	HHI
Ben & Jerry's	\$254.40	42.4%	1797.76
Nestlé	\$219.00	36.5%	1332.25
Dreyer's	\$114.60	19.1%	364.81
Others	\$12.00	2.0%	4
	\$600.00	100.0%	3498.82
Combined share		55.6%	
Premerger HHI			3,501
Delta			1,396
Postmerger HHI			4,897

Violates
Guidelines

Another important principle: *If the one-product unilateral effects profit-maximizing price increase is greater than 5%, the merging firms constitute a relevant market*

¹ Sherri Day, *Nestlé and Dreyer's to Merge in \$2.4 Billion Deal, Creating Top U.S. Ice Cream Seller*, N.Y. Times, June 18, 2002.

² Complaint, *In re Nestlé Holdings, Inc.*, 136 F.T.C. 791 (2003) (settled by consent decree).

Unilateral effects: Requirements

■ General requirements of the theory

1. There must be two products differentiated in prices (premerger or postmerger)
2. The products of the merging parties must be close substitutes for one another
3. The products of (most) other firms must be sufficiently more distant substitutes to permit the merged firm to profitably increase price for at least one of its products
4. Entry, expansion or repositioning into the products of the merging firms must be sufficiently difficult so as not to defeat the profitability of the merging firm increasing its prices postmerger

■ Specific Guidelines requirements

□ 1992: Merging companies—

1. had to be each other's closest competitors, *and*
2. the combined firm had to have a market share of at least 35%

Problem: Some cabining was necessary, since otherwise the unilateral effects theory applies too broadly to any merger where the combining firms have positive cross-elasticity with one another and a positive margin and the market exhibits barriers to entry and repositioning

□ 2010: Eliminated both the closest substitute and 35% share requirements

Unilateral effects

■ The profit-maximizing economics

- Suppose the merged firm increases its production of product A by one unit:

- Premerger, firm A was maximizing its profits, so its first-order condition must be satisfied:

$$mr_A^{\text{Premerger}} = mc_A$$

- Postmerger, the merged firm has to take into account the profits on any diverted sales from firm B (the other merging party) when the A's price is decreased to clear the market
- Firm B's lost profits (holding its price constant) is the diverted quantity times firm B's margin:

$$\Delta\pi_B = D_{B \rightarrow A} \$m_B$$

The quantity firm B recapture is $D_{A \rightarrow B}$ because firm A only decreased sales by one unit

- Accounting for firm B's lost profits on firm A's book gives firm A marginal revenue for a price increase as:

$$mr_A^{\text{Postmerger}} = mr_A - D_{B \rightarrow A} \$m_B$$

- But since $D_{A \rightarrow B} \$m_B > 0$, then:

$$mr_A^{\text{Postmerger}} < mr_A^{\text{Premerger}} = mc_A.$$

- That is, A's postmerger marginal revenue evaluated at A's premerger level of production is less than A's marginal cost. So A needs to reduce production and increase price postmerger to satisfy its FOC postmerger

Unilateral effects

■ The profit-maximizing economics

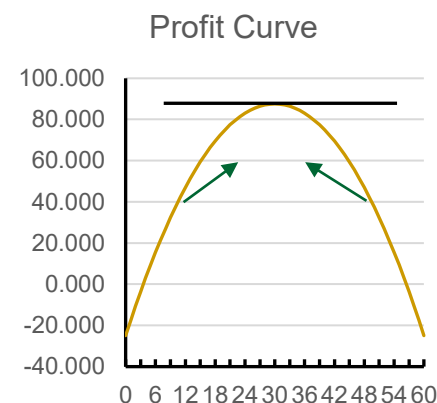
□ Question:

I'm confused. Unilateral effects is about increases in price, yet your explanations have all been in terms of increases in production and decreases in price. What gives?

□ Answer: Good question.

■ There are three ways to look at the formal economics of unilateral effects

- We could look at marginal increases in price, but then we would have to deal with marginal revenues and marginal costs as functions of price—which can be a struggle intuitively
- We could look at marginal decrease in production and a concomitant increase in price, but while marginal revenues and marginal costs would be functions of quantity, the FOC conditions becomes $-mr = -mc$ (since production decreases, marginal cost is negative). The formal economics is more intuitive than method 1, but still not that intuitive
- We could look at marginal increases in production even with a concomitant decrease in price. This is by far the most intuitive way of approaching the economics. It gives a mathematically equivalent result to the first two methods since ultimately we are interested in the relationship of the postmerger marginal revenue to the premerger marginal revenue when evaluated at premerger quantities. But whether we approach marginal revenue by starting to the left of the profit maximum and increasing quantity or starting to the right of the profit maximum and increasing price (and hence reducing quantity), we end up at the same place at the top of the hill with $m\pi = mr - mc = 0$.



Unilateral effects

■ Offsetting marginal cost efficiencies

- Query: What marginal cost reduction would be necessary to offset a one-product unilateral effect?

- No marginal cost efficiencies:

$$mr_A^{postmerger} = mr_A^{premerger} - D_{BA} \$m_B = mc_A$$

- Say the marginal cost efficiencies reduce marginal costs by e percent. Then:

$$mr_A^{postmerger} = mr_A^{premerger} - D_{BA} \$m_B = (1 - e)mc_A$$

- Rearranging and cancelling equal terms:

$$mr_A^{postmerger} = \cancel{mr_A^{premerger}} - D_{BA} \$m_B = \cancel{mc_A} - e \times mc_A$$

Remember:
 $mr_A^{premerger} = mc_A$

- So to restore the first order condition at original prices and output:

$$D_{BA} \$m_B = e \times mc_A$$

- That is, the downward pricing pressure from the marginal cost reduction must offset the upward pricing pressure

Unilateral effects in *H&R Block*

■ Court:

- Reframed unilateral effects in terms of a negative defense in rebuttal to the *PNB* presumption, so that the merging parties had the burden of production of showing that unilateral effects were unlikely
- Findings with respect to market definition make out a prima facie showing of unilateral effects:
 1. H&R Block and TaxACT products were differentiated in price
 2. H&R Block and TaxACT products were close substitutes to each other
 - Although not each other's closest substitutes
 3. (Most) other products were distant substitutes
 - But Intuit was a close—indeed, the closet—substitute to both H&R Block and TaxACT
 4. High barriers to entry, expansion, and repositioning was difficult

Unilateral effects in *H&R Block*

■ Defendants' rebuttal

1. Pledge to maintain TaxACT's current prices (more of a fix)

- **Defendants:** Would maintain current prices for three years
 - Argument: no price changes → no diversion → no anticompetitive unilateral effect
- **Court:** Not a defense even assuming truthfulness
 - Can create diversion in other ways
 - Could manipulate other variables (e.g., reduce functionality of free products) to make paid, more functional products more attractive
 - Could market free products less aggressively and more selectively

2. Two-brand strategy

- **Defendants:** Will maintain both brands—HRB (high end) and TaxACT (low-end)
- **Court:** Subject to anticompetitive manipulation in the attributes of products

3. Combined firm's market share too low

- **Defendants:** Combined share is only 28.4%
 - Below the 35% required in some cases and the 1992 Guidelines
- **Court:** There is no market share threshold for unilateral effects
 - Consistent with the 2010 Guidelines

4. Merging parties not each other's closest substitutes

- **Defendants:** Intuit is the closest DDIY substitute to both HRB and TaxACT
 - As required by some courts and the 1992 Merger Guidelines
- **Court:** Not required to be each other's closest substitute (consistent with the 2010 MG)

Merger simulation in *H&R Block*

- **Court:** Merger simulation also shows likely unilateral price increase
 - Merger simulations supposedly predict quantitatively the level of the combined firm's profit-maximizing price increase postmerger
 - Warren-Boulton did a merger simulation showing a likely substantial unilateral price increases in all three DDIY products following the merger
 - Predicted price increases postmerger—
 - TaxACT 83%
 - HRB 37%
 - TurboTax 11% ←

This results from an accommodating price increase within the Bertrand model

The quantification of a price effect resulting from a merger is called a merger simulation

Merger simulation

- Problems with merger simulation
 - Only as good as the model, the data, and the parameter estimates that go into the simulation
 - Often predict “hard to believe” price increases
 - Small changes in the model specification or the parameter estimation methods can result in big changes to the predicted postmerger price increases
 - Very few studies testing the accuracy of postmerger simulation with the use of actual postmerger data
 - That is, few studies examine how close or how far the simulated results are from what actually happened

Overall, courts have been very reluctant to give much weight to merger simulations

Merger simulation in *H&R Block*

- Warren-Boulton model: Used a very simple model—
 - Diversion ratios between HRB and TaxACT
 - Price-cost margins of the two products
 - A Bertrand pricing model
- The opinion did not give the details of the Bertrand pricing model
- But we will look at a “gross upward pricing pressure index” (GUPPI) simulation model

GUPPIs

■ Gross Upward Pricing Pressure Index (GUPPI)

- Definition (unmotivated):

$$GUPPI_A \equiv \frac{\text{value of profits from sales diverted to product B}}{\text{value of all sales lost by product A}} = \frac{\Delta q_B (p_B - c_B)}{\Delta q_A p_A}$$

- Let $m_B = \frac{p_B - c_B}{p_B}$ the percentage gross margin of product B and D_{AB} be the diversion ratio between product A and product B.

Then multiplying by p_B/p_B yields:

$$GUPPI_A = \frac{\Delta q_B}{\Delta q_A} \frac{(p_B - c_B)}{p_B} \frac{p_B}{p_A} = D_{AB} m_B \frac{p_B}{p_A},$$

Remember, m is the percentage margin, so $m_B p_B$ is the $\$m_B$

which is the usual form of the expression for a GUPPI

- Section 6.1 of the 2010 DOJ/FTC Horizontal Merger Guidelines implicitly creates of measure of this type

GUPPIs

■ Merger simulation with GUPPIs (in a very special case)

□ Assumptions

- Linear residual demand curves
- Equal diversion ratios ($D_{AB} = D_{BA} = D$)
- Equal marginal costs, equal prices, equal margins, and equal market shares

□ In a Bertrand competition model, the GUPPI gives the profit-maximizing price increase postmerger under the unilateral effects theory

1. The profit-maximizing price increase for product A leaving the price of product B at its premerger level:

$$\frac{\Delta p_A^*}{p_A} = \frac{GUPPI}{(1-D)} = \frac{Dm}{(1-D)} \quad \text{since } p_A = p_B \text{ and so } p_A/p_B = 1$$

2. The profit-maximizing price increase for both product A and product B when raising the price of both products:

$$\frac{\Delta p_A^*}{p_{B1}} = \frac{\Delta p_B^*}{p_B} = \frac{GUPPI}{2(1-D)} = \frac{Dm}{2(1-D)}$$

Why look at so special a case?

Because the Merger Guidelines uses this model in Example 5!

GUPPIs

■ Merger simulation with GUPPIs in the Merger Guidelines

□ Example 5 of the 2010 DOJ/FTC Horizontal Merger Guidelines

Products A and B are being tested as a candidate market. Each sells for \$100, has an incremental cost of \$60, and sells 1200 units. For every dollar increase in the price of Product A, for any given price of Product B, Product A loses twenty units of sales to products outside the candidate market and ten units of sales to Product B, and likewise for Product B. Under these conditions, economic analysis shows that a hypothetical profit-maximizing monopolist controlling Products A and B would raise both of their prices by ten percent, to \$110.

■ How do the Guidelines predict that the profit-maximizing price will increase by \$10?

□ Summary of parameters

$$p = \$100$$

$$c = \$60$$

$$D = \frac{10}{10 + 20} = 1/3$$

$$m = \frac{p - c}{p} = \frac{100 - 60}{100} = 0.4$$

□ The market exhibits linear demand and complete symmetry, so we can use the simple GUPPI model:

$$\frac{\Delta p_1^*}{p_1} = \frac{\Delta p_2^*}{p_2} = \frac{Dm}{2(1-D)} = \frac{(1/3)(0.4)}{2(1-1/3)} = 0.10 \quad \text{or } 10\%$$

So price will increase from \$100 to \$110

GUPPIs

■ Merger simulation with GUPPIs

- The model so far is very restrictive with all of its symmetry conditions
- Loosening these conditions makes things complicated very quickly
 - For example, when residual demand for both firms is linear but diversion ratios and margins differ, the optimal price increase formula becomes:

$$\frac{\Delta p_A^*}{p_A} = \frac{(D_{B \rightarrow A}(D_{B \rightarrow A} + D_{A \rightarrow B}))m_A + 2D_{A \rightarrow B}m_B}{4 - (D_{B \rightarrow A} + D_{A \rightarrow B})^2}$$

You should just see this to understand how quickly the formula becomes with a relaxation of the restrictions. You will not be required to know or use the formula.

Class 16 slides

Unit 10: U.S. Sugar/Imperial Sugar

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

October 25, 2022

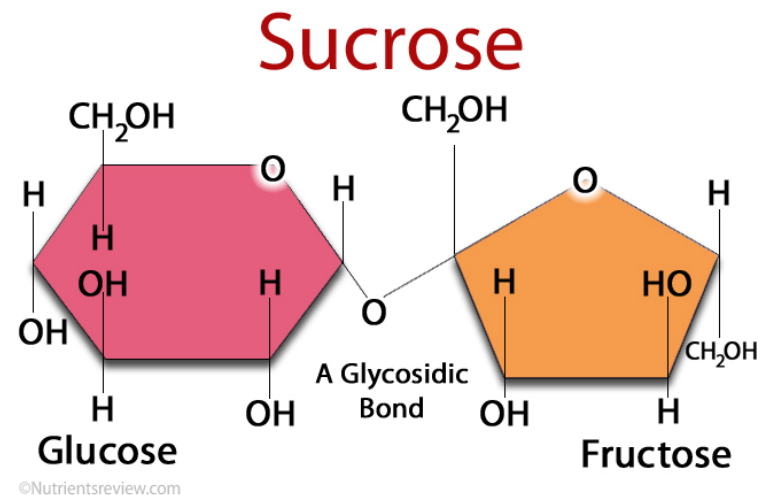


The Sugar Industry

The sugar industry

■ Refined sugar

- ❑ Food-grade sugar that is produced by refining sugar cane or processing sugar beets into sucrose (a combination of glucose and fructose)
 - ❑ Refined sugar produced from sugar beets is chemically identical to that produced from sugar cane
 - ❑ Types:
 - Granulated (99.5% sucrose—white in color)
 - Brown
 - Powdered
 - Liquid
- } Produced from additional processing of granulated sugar



Sugar production from sugar cane



Sugar cane



Raw sugar



Refined sugar

- Perennial grass containing about 14% sucrose
- Grown in Florida (51.9%), Louisiana (44.6%), and Texas (3.5%)
- Not imported—Value-to-weight ratio too high
- Partially refined sugar processed from sugar cane
- Sugar mills close to the sugar cane plantations crush the cane and extract/partially refine sugar
- Primarily sucrose (96-99%) with some natural molasses
- Light brown in color
- Relatively inexpensive to transport
- Significant imports
- Can be consumed
- Fully refined sugar processed from raw sugar
- Types:
 - Granulated (99.5% sucrose -- white in color)
 - Brown, powdered, liquid—produced from granulated
- Significant imports

Sugar production from sugar beets



Sugar beets

- Root crop containing about 16% sucrose
- Grown in eleven states: California, Colorado, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, and Wyoming

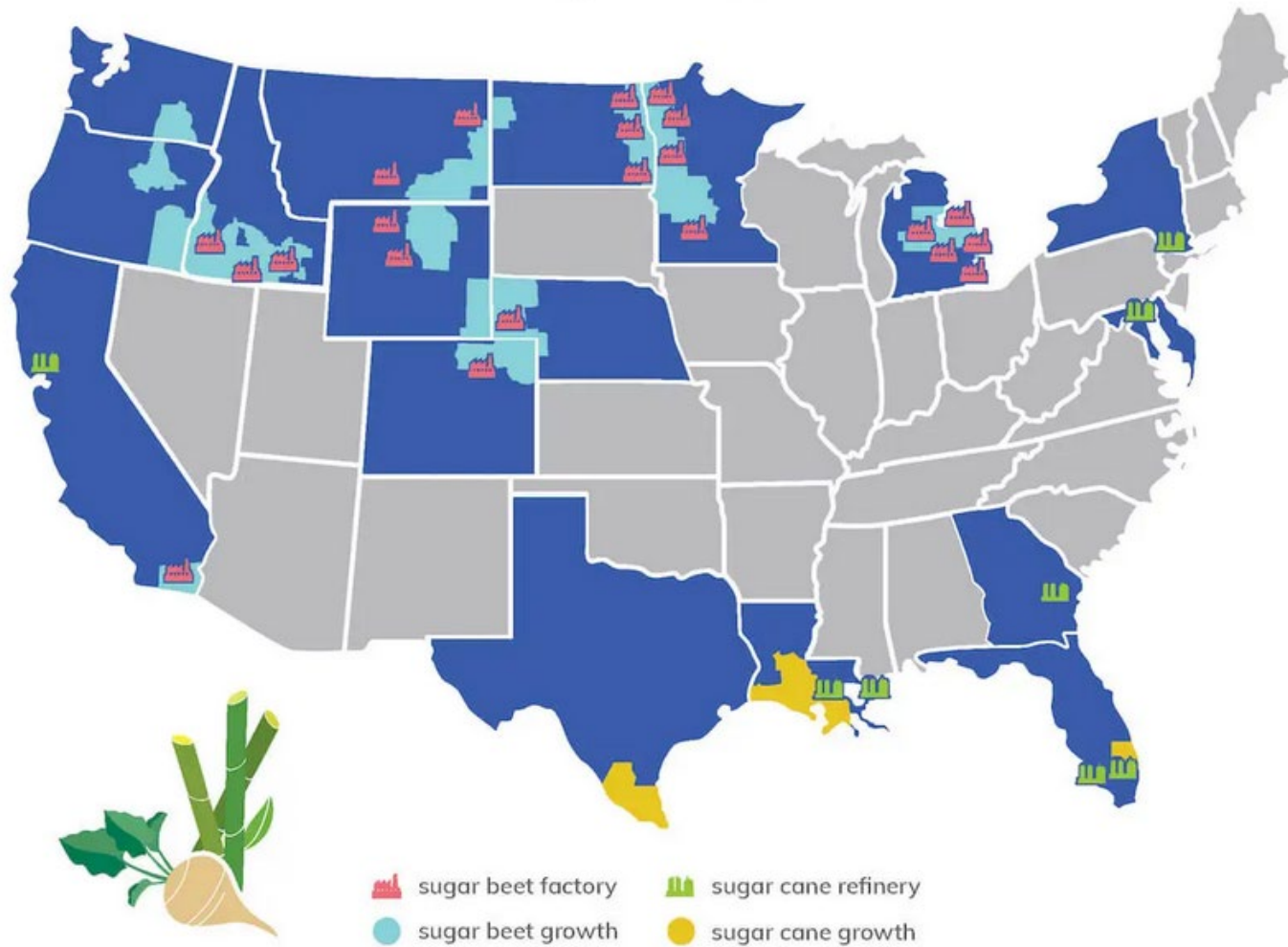


Refined sugar



- Fully refined sugar directly from sugar beets
- Chemically identical to sugar produced from sugar cane
- 99.5% sucrose (0.5% water)
- Seven U.S. sugar refiners
- White in color (without additives)
- Significant imports

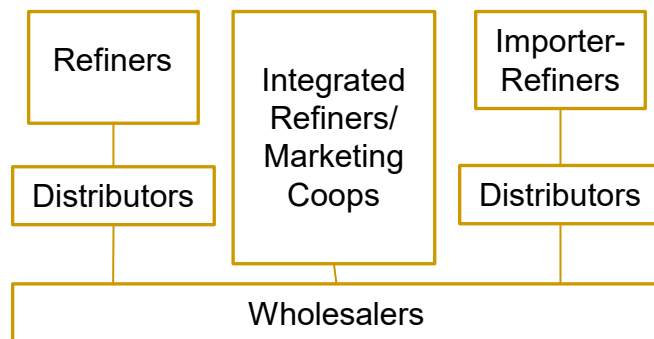
U.S. sugar production



Source: The Sugar Ass'n, [U.S. Sugar Industry](#)

Industry organization

■ Production, distribution, and sale



■ Wholesaler purchases

- Most purchases done through a “Request for Proposal” (RFP)
 - Most RFPs are for delivered prices
- Essentially, suppliers bid for wholesaler business through their responses to the RFPs

USDA Federal Sugar Program

- Sugar supply is largely regulated by the USDA

The Federal Sugar Program, as run by the USDA, purports to balance somewhat competing government policies that impact the price of sugar - i.e., the Government's support of American sugar cane and sugar beet farmers by ensuring that there is a guaranteed floor price to be able to stay in business and the Government's interest in ensuring that sugar prices do not get too high for the many businesses (known as sugar "users") that buy sugar to use in their products.¹

- The USDA controls the supply of sugar in the United States through—
 - Marketing allotments for domestic sugar processors
 - Individually set for each processor
 - Caps the amount of sugar the processor is allowed to sell
 - A system of tariff rate quotas (TRQs) on sugar imports and free trade agreements
 - Imports under the quota are charged a discounted duty rate
 - Imports over the quota are charged the full duty rate—essentially makes these imports unviable
 - → TRQ imports effectively constrain domestic prices
 - Control over Mexican imports under the U.S. Mexico Suspension Agreements
 - Since 2007, USDA has taken at least 30 actions to increase foreign sugar imports into the U.S. when it believed that additional supply was necessary

¹ Op. at 16.

The Deal

The deal

- U.S. Sugar to buy Imperial Sugar
 - Merger Agreement signed March 24, 2021
 - Purchase price: \$315 million
 - Later reduced to \$297 million
 - Asset purchase—Buying only assets, not stock
 - Imperial's Port Wentworth facility
 - Imperial's leasehold interest in a sugar transfer and liquification facility in Ludlow, KY
 - Four retail brands:
 - Imperial Sugar
 - Dixie Crystals
 - White gold
 - Holly Sugar
 - Drop-dead date: September 24, 2022

The parties

■ U.S. Sugar

- ❑ Privately held Delaware corporation headquartered in Clewiston, FL
- ❑ Owns and operates a cane mill and cane refinery in Clewiston
 - Refinery capacity: 850,000 tons annually—operates at maximum capacity
 - Produces only granulated and liquid sugar
 - ❑ Not brown or powdered sugar
 - Less than 7% nationwide refined sugar capacity
- ❑ Vertically integrated in sugar cane growing
 - Plantations in South-Central Florida (200,000 acres)
 - Grows more sugar than U.S. Sugar can process
 - So sells sugar cane to third-party mills in Florida
- ❑ Vertically integrated into distribution
 - USG owns United Sugars Corporation (“United”) with three other sugar producers
 - ❑ United States Sugar (can sugar)
 - ❑ American Crystal Sugar Company (beet sugar)
 - ❑ Minn-Dak Farmers Cooperative (beet sugar)
 - ❑ Wyoming Sugar Company, LLC (beet sugar)
 - United is a marketing cooperative that controls the pricing, marketing, and sale of all the sugar of its four members¹

¹ Presumably, United is immune from the antitrust laws as an agricultural cooperative under the Capper-Volstead Act, 7 U.S.C. § 291.

The parties

■ Imperial Sugar

- Headquartered in Sugar Land, TX
 - Wholly-owned by Louis Dreyfus, a leading worldwide merchant and processor of agricultural goods headquartered in the Netherlands
- Owns and operates cane sugar refinery in Port Wentworth, GA
 - Imperial Sugar's principal asset
 - Experienced a major explosion in 2008 that destroyed the plant—damaged part rebuilt in 2009
 - Capacity: _____
 - Produces granulated, brown, powdered, and liquid sugar
 - Sells refined sugar into more than 40 states, including Texas, Indiana, Pennsylvania, and Ohio
- Does not own any cane farming or milling assets—imports > 90% of raw sugar



Imperial's Port Wentworth
sugar refinery

After 2008 explosion

Today



Deal benefits¹

- Imperial's Port Wentworth current operations
 - Input supply limitations
 - Import-based refiner—imports > 90% of its raw sugar
 - Still, can only run at about 75% of capacity due to lack of supply
 - Accounts for about 7% of nationwide sugar refining capacity
 - Input cost limitations
 - Raw sugar comprises about 70-80% of the delivered price of Imperial's refined sugar
 - Has higher input costs than refineries vertically integrated into sugar cane or sugar beets
 - Investment limitations
 - High-cost producer dependent on imports subject to tariffs
 - Some equipment from the 1940s
 - Uncertain financial future
 - Louis Dreyfus has limited investment to maintenance and safety/health/environmental
 - Market position
 - Declining over the last several years
 - Principally a residual or back-up supplier
 - Prospects of sale
 - Louis Dreyfus has been trying to sell Imperial for the last five years

¹ Taken from findings of fact in the opinion. Op. at 22-23.

Deal benefits

■ Benefits of acquisition

- Mitigation of input supply limitations
 - U.S. Sugar grows more sugar cane than it can process and refine
 - U.S. Sugar will be able to provide between 84,000-168,000 shorts tons annually to Port Wentworth
- Production expansion
 - U.S. Sugar plans to expand Port Wentworth's annual production from 805,000 short tons to 875,000 short tons, an increase of 70,000 short tons or 8.7%¹
 - U.S. Sugar will use "targeted expenditures" to increase the capacity utilization at Port Wentworth
- Transportation cost savings
 - Adding Port Wentworth to the United distribution network expected to save \$8-12 million (annually?)
- Reliability of supply
 - Adding Port Wentworth to the United distribution network will increase reliability of supply to premerger Port Wentworth customers
- Port Wentworth's future absent the acquisition
 - "If the U.S. Sugar acquisition does not proceed, Imperial's CEO is 'quite worried' about Imperial's future prospects."

¹ The opinion gives the difference as 140 million pounds. Op. at 22. Some conversions are necessary. The opinion gives the before and after numbers in cwt (hundredweight, short, US), which equals 0.5 short tons. Converting cwt to short tons, the before and after production levels are 805,000 and 875,000, respectively (as given in the text), for a difference of 70,000 short tons. But each short ton equals 2000 pounds, so 70,000 short tons equals 140 million pounds.

DOJ complaint

- *Filed:* November 23, 2021
 - Seven months after the signing of the merger agreement
- *Claim:*
 - Acquisition would substantially lessen competition—
 - in the production and sale of refined sugar Relevant product market
 - to wholesale customers Targeted customers
 - In—
 - the Southeastern United States, *and*
 - Georgia Relevant geographic markets
- *Prayer:* Permanent injunctive relief blocking the transaction

DOJ complaint

- A note on the DOJ's prima facie case of anticompetitive effect
 - The *PNB* presumption: Transaction treated largely as a 3-to-2 merger with a fringe
 - Southeastern United States
 - Combined share: 46% ← From DOJ Post-Trial Brief
 - Delta: 800
 - Postmerger HHI: 2800
 - Postmerger 2FCR: 75%
 - Georgia
 - Combined share: 54% ← From DOJ Post-Trial Brief
 - Delta: 1100
 - Postmerger HHI: 3100
 - Postmerger 2FCR: 75%
- A trick in deconstructing market share OPTIONAL
 - In many opinions, the market shares of the merging parties are redacted
 - However, the opinion may report the combined market share and the associated HHI
 - Let a and b be the market shares of the merging companies
 - Then:
 - $a + b = \text{combined share}$
 - $2ab = \text{delta}$
 - These are two simultaneous equations in two unknowns, so you can solve for a and b
 - If you like, use a simultaneous equations calculator like [Symbolab](#)

DOJ complaint

- A note on the DOJ's prima facie case of anticompetitive effect
 - Dimensions of anticompetitive harm
 - Price
 - (Throwaway:) Reliability of supply
 - Unilateral effects
 - “The proposed transaction would eliminate head-to-head competition between United and Imperial in both relevant markets.”
 - The idea
 - United and Imperial are the two lowest cost suppliers for some customers and the acquisition will eliminate their independence
 - Competition for these customers will be between the combined firm and the third-lowest-cost supplier, resulting in an anticompetitively higher winning bid price¹

¹ We will develop this bidding theory of unilateral effects in the next class when we study Sysco/U.S. Foods.

DOJ complaint

■ A note on the DOJ's prima facie case of anticompetitive effect

□ Coordinated effects

“The proposed transaction would increase the incentive and ability of industry giants United and Domino to coordinate to raise prices and reduce quality.”

■ Premerger susceptibility

- Refined sugar is a relatively homogeneous product
- Sugars prices “relatively transparent” (from customers)/Competitors monitor each other's prices
- Competitors can readily identify incumbent suppliers for each customer—makes it easy for coordinating firms from “poaching” each other's customers
- Only three significant competitors in the two markets: USS/United, Domino, and Imperial
- High barriers to entry/expansion

■ Increased likelihood or effectiveness

- Only two significant competitors would remain postmerger: USS/United and Domino
- Transaction more closely aligns the incentives of USS/United and Domino by increasing homogeneity across firms
 - Factors:
 - Domino is a large vertically integrated firm that imports some raw sugar
 - USS is somewhat smaller and imports no sugar/Imperial purchases some imported raw sugar
 - Creates more similarly sized firms
 - Creates a similar level of vertical integration [WDC: ???]

DOJ complaint

- A note on DOJ's response to anticipated downward pricing pressure defenses

- Entry/expansion defense

“Entry and expansion will not prevent the substantial harm threatened by this deal”

- High barriers to building or expanding a refinery
 - High transportation costs limit the ability of outside refiners to increase shipments into the relevant markets

- Efficiencies defense

“There are no merger-specific efficiencies that outweigh the substantial harm threatened by this deal”

¹ Complaint ¶ 57.

DOJ complaint

■ A note on the USDA Federal Sugar Program

“USDA’s sugar policy will not prevent the substantial harm threatened by this deal”

- ❑ USDA does not run its programs to ensure competition in the sale of refined sugar to wholesalers
- ❑ USDA programs permits “significant regional variations in the prices charged to customers due to differences in competitive conditions in each area”¹

¹ Complaint ¶ 57.

DOJ complaint

■ Request for relief

1. Declaration that the acquisition would violate Section 7
2. Permanently enjoining defendants from consummating the acquisition
3. Award the United States the costs of its action
4. Grant the United States such other relief as the Court deems just and proper

The trial

■ Venue

- ❑ Filed November 23, 2021
- ❑ In the District of Delaware

■ Judge Maryellen Noreika

- ❑ Nominated by President Donald Trump
- ❑ Sworn in: August 9, 2018
- ❑ Reportedly considered by President Biden for the Federal Circuit

■ Trial

- ❑ Parties stipulated to a TRO—proceeded to trial on the merits
 - Court consolidated proceedings under Rule 65(a)(2)
- ❑ Trial began on April 18, 2022 (four days)—5 months after the complaint was filed
 - 30 fact witnesses/2 expert witnesses
 - Exhibits: 24 (joint), 74 (plaintiffs), 31 (defendants)
- ❑ Decision: Permanent injunction denied on Sept. 23, 2022
 - 9 months after complaint filed
- ❑ Currently on appeal



Experts

■ DOJ: Dr. Dov Rothman

- ❑ Managing principal at Analysis Group
- ❑ Ph.D in business administration from the Haas School of Business, University of California, Berkeley
- ❑ Joined Analysis Group in 2006
- ❑ 2004-2006: Assistant Professor, Mailman School of Public Health, Columbia University
- ❑ Testified in multiple antitrust cases
 - Including four merger cases for the government



■ Merging parties: Dr. Nicholas Hill

- ❑ Partner at Bates-White
- ❑ Ph.D in economics, Johns Hopkins University
- ❑ Joined Bates-white in 2017
- ❑ Prior 12 years as a government antitrust economist
 - 2014-2017: ATD Assistant section chief
 - 2013-2014: FTC staff economist
 - 2006-2013: ATD staff economist
- ❑ Testified in several antitrust cases



Relevant product market

■ DOJ case-in-chief:

□ *Product type*: Refined sugar

- Not distinguishing from sugar produced from cane or beets
- Not contested by the merging parties

□ *Market participants*:

- Includes refiners, marketing coops with refiner members, and importers

DOJ post-trial brief and court opinion could be clearer here

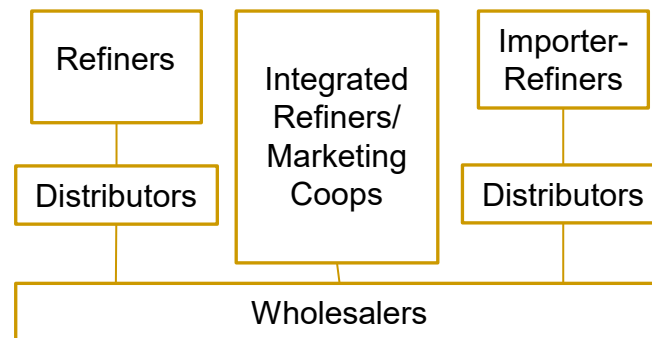
- *Query*: How to assign market shares when a marketing cooperative has multiple refiner members?

- Excludes independent distributors

- “The proper focus for this case is competitors that produce and sell refined sugar, and not distributors that resell sugar that they have purchased from refiners.”¹
- *Argument*: Independent distributors must obtain their refined sugar from refiners, and the refiners can tacitly coordinate to limit the ability of these independent distributors to compete through decision on pricing and supply

- Basic idea

- Complaints focuses on the control of refiners on wholesale prices
- Looks to an anticompetitive effect on sales to grocery stores, distributors, food and beverage manufacturers and other wholesale customers



¹ Plaintiff United States of America’s Post-Trial Brief 15 (May 6, 2022).

Relevant product market

- DOJ allegations:

- Market participants:

- Excludes independent distributors—From DOJ’s Post-Trial Brief:

Distributors depend on refiners to obtain refined sugar and need to add a margin on top of the price that they pay for that refined sugar to stay profitable. As a result, distributors do not constrain refiners, but instead serve smaller customers (e.g., customers who need less than a truckload of sugar), fill gaps in larger customers’ annual sugar purchases, or provide additional products or services not offered by the refiners. Defendants’ own ordinary-course documents characterize distributors as customers and do not assign them market shares. Refiners partner with distributors when it suits them, and they disintermediate distributors and sell directly to end-use customers when it does not. Tellingly, even Defendants do not argue that distributors should be assigned market shares for all of their refined sugar sales in the relevant markets. In their closing argument, Defendants “admit[ted] there are certainly instances where distributors are not acting as a competitive constraint.” Similarly, Dr. Hill conceded that at least some sales by distributors should be attributed back to the refiners who produced the sugar.¹

- There is judicial support for the proposition that distributors who simply resell products purchased from primary suppliers should be excluded from the relevant market containing the primary suppliers

¹ Plaintiff United States of America’s Post-Trial Brief 18-19 (May 6, 2022) (record citations omitted)

Relevant product market—Problem 1

- *Court*: The DOJ failed to make out a prima facie case that independent distributors should be excluded from the relevant market

- *Fundamental conception issue*: Consider two scenarios—

1. A sugar beet processor that does not sell into the DOJ's market sells to an independent distributor that does sell into the DOJ's market. Neither company is a participant in the DOJ's market
2. Same sugar beet processor and distributor, but they are in an agricultural coop. The processor/coop are now a participant in the market.

Court:

- Makes no economic sense to exclude the distributor in the first scenario but include them in the second scenario
- Ignores the “market realities” of the competition the distributor brings to the relevant market in the first scenario
- Evidence shows that distributors compete against refiners
 - Customers do not care if they purchase from a refiner, a coop, or an independent distributor
 - Distributors sell large volumes of suage into the southeastern United States
 - Numerous examples of distributors taking significant business away from refiners or refiner/coops
 - Distributors are not “controlled” by refiners from whom they purchase
 - Purchase from many sources (including imports of refined sugar)
 - Successfully compete against refiners that supply them
 - Refiners view distributors as competitors

Relevant product market—Problem 1

- *Court*: The DOJ failed to make out a prima facie case that distributors should be excluded from the relevant market
 - Conclusion:

Because a division of the refined sugar market into “refiner or cooperative sold” refined sugar and “distributor sold” refined sugar would be inconsistent with the commercial realities of the industry, the Court must reject the Government's proposed product market. **And as the Government admits that it does not have evidence to prove its case if distributors are included in the product market, and there is no alternative product market offered, the Government cannot prevail in this case.**¹

- WDC:
 - Did defendants show that if distributors were included in the DOJ’s alleged markets, the *PNB* presumption would not be triggered?
 - Or did the DOJ simply did not do the analysis to show that it would be triggered?

¹ Op. at 47.

Relevant product market—Problem 2

- *Court*: The DOJ failed to make out a prima facie case that industrial and retail wholesale customers should be included in the same market

- The DOJ included both types of customers in its alleged markets

- BUT—

- Suppliers have separate sales teams for industrial and retail customers
- Different suppliers can sell significantly different percentage sales to industrial and retail customers
- Failure of proof in making out the prima facie case

“At trial, the Government offered no testimony or documentary evidence from or about non-industrial customers to show that they are similarly situated to industrial customers such that all should be grouped together as ‘wholesale customers’ in the relevant product market.”¹

- WDC:

- Presumably, the defendants put this question into issue by introducing evidence of significant differences between industrial and retail wholesale customers
- But it is strange that the court did not continue its analysis to show that separating the two customer types mattered to the conclusion of the competitive analysis
- It is unlikely that the court would reject the DOJ’s market definition on this ground alone, but it undoubtedly increased the court’s confidence that the DOJ’s product market definition was wrong

¹ Op. at 33.

Relevant geographic market

■ DOJ allegations:

□ Two relevant geographic markets—

1. The Southeastern United States

- Alabama, Delaware, District of Columbia, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia
- Defined by the U.S. Census Bureau as the East South Central and South Atlantic

2. “Georgia Plus”: Georgia plus five bordering states

- Alabama, Georgia, Florida, South Carolina, North Carolina, and Tennessee

□ Defined by wholesale customer location

- Wholesale customers purchase through RFPs for delivered price supply contracts
- Wholesale customers do not engage in arbitrage—they use what they purchase
- This allows suppliers to charge customers different prices based on their location depending on:
 - The cost of transportation from the refinery to the customer, *and*
 - The number and significance of other suppliers that can reasonably supply the customer

□ Economic support

- Rothman’s application of the HMT

Relevant geographic market

- DOJ allegations:

- Boundaries determined by high transportation costs of refined sugar:

Transportation costs can add thousands of dollars to the total cost of a delivery, and the need to ship refined sugar even a few hundred additional miles can yield a substantially higher total price for the customer. **Based on data from United, shipping refined sugar an additional 500 miles by truck would increase the price of delivered sugar by over 10 percent. Making the same shipment entirely via rail, which is often impossible, would increase the price of delivered sugar by more than five percent.** Because of these transportation costs, wholesale customers in the Southeast rely heavily on producers that have large refineries located nearby. United has an advantage in this region through its ability to sell sugar from U.S. Sugar's refinery in Florida, as well as from other United members' refineries. Imperial is also well positioned to serve customers in the Southeast from its refinery in Savannah, Georgia.

...

[T]he cost to transport refined sugar limits the geographic reach from which a customer can cost-effectively buy refined sugar.¹

¹ Complaint ¶¶ 4, 30.

Relevant geographic market

■ Southeastern geographic market



Imperial refinery
(Port Wentworth, GA)

Florida Crystals (Domino) refinery
(Okeelanta, FL)

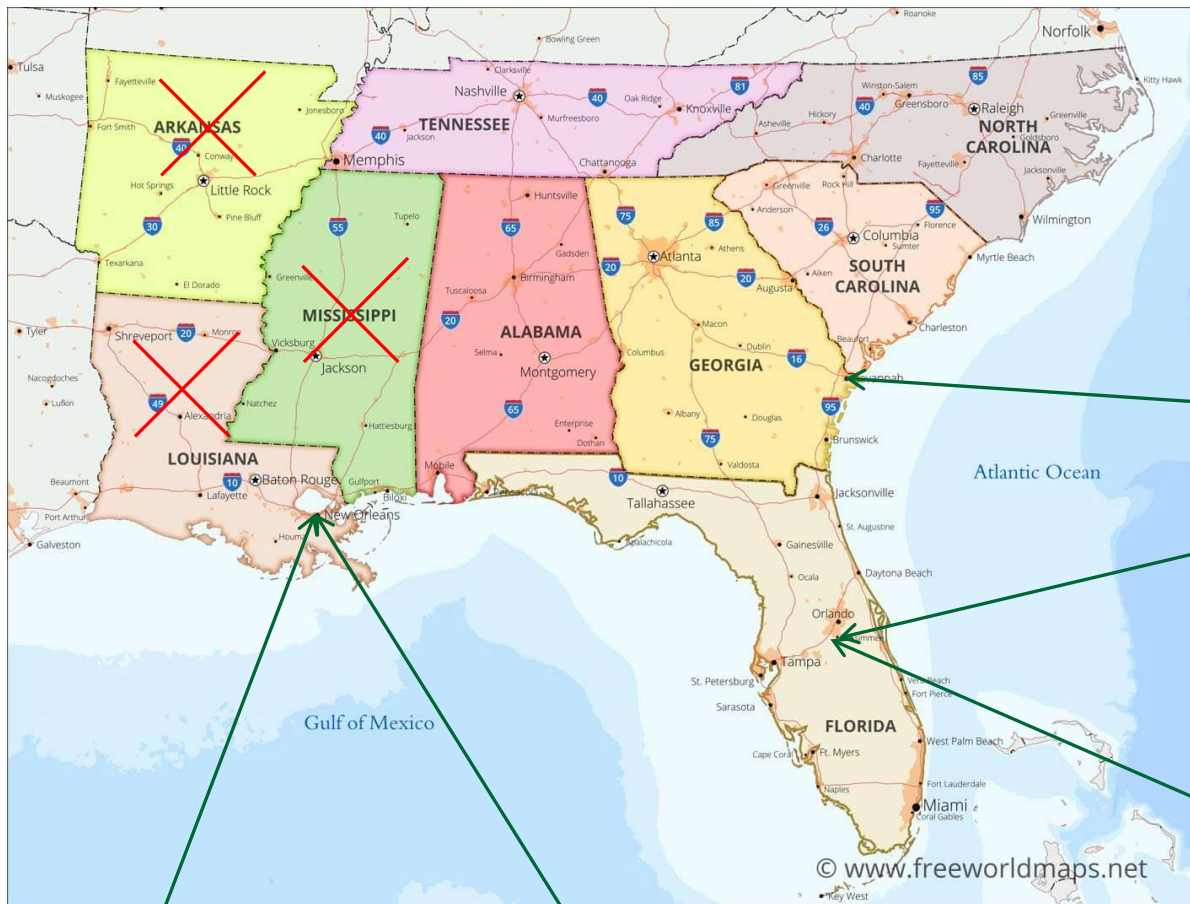
USS refinery
(Clewiston, FL)

LSR refinery
(Gramercy, LA)

Domino refinery
(Chalmette, LA)

Relevant geographic market

■ Georgia plus five bordering states



LSR refinery
(Gramercy, LA)

Domino refinery
(Chalmette, LA)

Imperial refinery
(Port Wentworth, GA)

Florida Crystals (Domino) refinery
(Okeelanta, FL)

USS refinery
(Clewiston, FL)

Relevant geographic market

- *Court*: DOJ failed to make out a prima facie case that either of the alleged relevant geographic markets were proper markets in which to analyze the acquisition
 - Rothman did not independent analysis to determine whether these were the proper markets in which to analyze the competitive effects of the transaction
 - The staff apparently defined the markets; Rothman just applied the HMT
 - Rothman cites no documents or the USDA that groups the states together in the alleged “Southeast” market and only one document for the “Georgia Plus” market
 - Shipments across alleged market boundaries
 - Customers in the alleged markets purchase and receive refined sugar—large quantities—from many locations and suppliers outside of each market (citing numerous examples)
 - Many of these out-of-market suppliers have additional supply that could be sent into the market
 - Customers within the alleged markets also have the ability to pick up sugar at locations outside of the alleged markets
 - 30-35% of customers pick up sugar at their supplier
 - 3% of customers pick up sugar at a supplier location outside of the alleged geographic markets and transport the sugar into the market
 - Some suppliers outside of the alleged markets are expanding capacity and targeting sales in the alleged “Southeast” market
 - Especially true of suppliers located in Louisiana (e.g., LSR/Cargill)

Relevant geographic market



Source: The Sugar Ass'n, [U.S. Sugar Industry](#)

Relevant geographic market

- *Court*: The DOJ failed to make out a prima facie case that distributors should be excluded from the relevant market
 - WDC: More fundamentally, the DOJ improperly applied the HMT
 - The DOJ defined its markets by reference to customer locations
 - That is appropriate provided that the market participants are properly identified and their market shares properly assessed
 - The principal—if not only—economic support for the DOJ’s alleged markets was the hypothetical monopolist test: Rothman apparently testified that—
 - Any product grouping that satisfies the HMT is a relevant market in which to analyze the transaction
 - A competitive problem in any one HMT-market is sufficient for the transaction to be anticompetitive in an economic sense
 - As an expert economist, Rothman could not testify whether the transaction would violate Section 7
 - In applying the hypothetical monopolist test, the DOJ apparently fixed the market shares at current sales and failed to take into account supply responses of firms outside of the market in assigning market shares to a price increase only within the relevant market¹
 - Almost surely, the out-of-market supply-side responses would have eliminated the profitability of the price increase in both relevant markets

¹ For background, see the Market Definition class notes at slides 27-36.

PNB presumption

- Not addressed in opinion since DOJ failed to make out its prima facie case on market definition
 - However, the court almost surely was influenced by the failure of the DOJ's market shares to make economic sense
 - Failed to account to distributors as market participants and assign them shares
 - Failed to account for out-of-market suppliers who would increase shipments into the alleged market in response to an in-market SSNIP
 - Failed to account for out-of-market suppliers that did not ship refined sugar into the alleged markets today but would ship tomorrow in the event of an in-market SSNIP
 - Failed to account for planned capacity expansions and increased shipments into the alleged markets
 - All these factors would influence the state of competition in the alleged markets but are not captured by the market shares the DOJ sought to use to predicate the *PNB* presumption

The USDA as a competitive constraint

■ DOJ:

- USDA programs not designed or used to protect sugar markets from an anticompetitive effect arising from a merger
 - Appears to be an unsupported assertion
 - USDA did not testify at the trial—has no official position on the competitive effect of the acquisition
 - Does not appear to be any supporting testimony from anyone else

The USDA as a competitive constraint

■ The merging parties:

- The USDA has tools to ensure continued competition in the market postmerger in the event the transaction could affect sugar prices
 - Presented testimony by Dr. Barbara Fecso
 - Ph.D economist who worked at USDA for almost 30 years
 - Worked with the Federal Sugar Program for almost 20 years
 - Spoken with parties and learned of their postmerger plans
 - Fecso testimony:
 - Transaction unlikely to lead to higher prices
 - Instead, if claimed efficiencies are achieved, prices are likely to go down
 - Even if prices increased, supply would flow in from outside the market to bring prices back down
 - Failing that, USDA could “respond appropriately” (with support in the record)

For example, in December 2021, the USDA increased the overall domestic allotment quantity and reassigned allotments to increase supply, doing so specifically to address “high sugar prices.”¹

- *Query: Was Fecso qualified as an expert witness under Rule 702?*
 - Court did not say, but since offered opinions she should have been
 - UNLESS she somehow qualified as an “lay” expert under rule 701

¹ Op. at 18.

The USDA as a competitive constraint

■ Court:

- Agreed with merging parties that the USDA has the tools to protect against any anticompetitive effect arising from the transaction
 - Found Dr. Fecso's testimony persuasive even though testifying in her personal capacity

There is no one else at USDA that has a longer tenure working on the Federal Sugar Program or in making recommendations to the undersecretaries for the Federal Sugar Program. **The Court found Dr. Fecso to be an exceptionally knowledgeable and particularly credible witness.**¹

- Influence by the DOJ's decision not to offer USDA documents or testimony or even have Dr. Rothman talk to USDA officials:

It is noteworthy that the Government did not offer any documentary or testimonial evidence from USDA as to its view of the anticipated effects of U.S. Sugar's acquisition of Imperial. In essence, the Government decided to shield USDA officials from having to answer questions about the interplay between free market competition and the Federal Sugar Program.²

¹ Op. at 56.

² *Id.* at 55.

Lessons

■ Why the DOJ lost

1. The DOJ's alleged markets did not comport with the "commercial realities"

- Make the case for the market definition first using documents and testimony from business participants that support the alleged markets
 - Use the HMT as confirmation, not as the primary evidence
 - Especially important if the merging firms will present documents and testimony from business participants that contradict the alleged market as contrary to the commercial realities
- Use your economist properly
 - The economist should develop an independent analysis of the relevant markets
 - Should not take the markets proposed by the staff as a starting point
 - Should start with an economic analysis of documents and deposition testimony
 - Support with a separate economic analysis of customer substitutability and supply-side switching
 - Find powerful anecdotes to illustrate conclusions
 - Finally, confirm with the HMT

2. The market participants did not comport with the "commercial realities"

- Make sure that all firms that exert pricing pressure are identified as market participants
- If there is substantial business evidence is that a firm is a competitor in the market, then need compelling contrary evidence to reject that firm as a market participant

Lessons

■ Why the DOJ lost (con't)

3. The DOJ's proffered market shares did not make economic sense

- Not in the opinion, but probably an important factor in the outcome
- The DOJ's market shares did not account for likely significant out-of-market supply-side responses to a in-market price increase, undermining confidence that the shares could be used to predicate the *PNB* presumption

4. Failed to disprove the merging parties' claimed efficiencies

- The opinion did not address the DOJ's challenge to the parties' claimed efficiencies, but the findings of fact make equally clear that efficiencies were accepted by and important to the judge
- If the merging parties have a compelling efficiencies story to tell and persuasive witnesses to tell it, need equally compelling evidence to show that the claimed efficiencies are suspect and should not be considered
 - In this situation, a challenge only on verifiability or merger-specificity is increasing unlikely to work
 - Need a business witness or expert to disprove efficiencies
- If the efficiencies cannot be disproved altogether, then some analysis is necessary to show that the transaction will be anticompetitive even in the presence of the efficiencies

5. Picked the wrong economist

- Do not use an economist whose testimony has been soundly rejected by multiple courts
 - Or even one court (if good alternatives exist—which they almost surely will)
 - Once an economist has been found flawed and unpersuasive by one court, it is that

Lessons

■ Why the DOJ lost (con't)

6. Failed to rebut Dr. Fesco

- Needed some expert to testify the USDA does not monitor or care about regional price differences
- AND would not take action to lower prices by increasing TRQs or reallocating processor allotments
- Moreover, the tools the USDA has operate nationally and not regionally

Lessons

■ Why the merging parties won

1. The merging parties had a compelling story to tell and persuasive witnesses to tell it

- A compelling efficiencies is critical to capturing the “heart” of the judge—a critical step in prevailing in the case
 - A compelling efficiencies story means that there is a consumer welfare loss if the court erroneously blocks a merger that is in fact not anticompetitive
 - Makes the court much more cautious in ruling for the plaintiffs
- Focus on “easily” proved efficiencies—
 - Output expansion
 - Here, investment to expand plant capacity and new sources of raw sugar to fill plant to capacity
 - Input cost reduction
 - Here, shifting to low-cost internal supply of raw sugar and away from high-cost imports

2. Successfully rebutted the DOJ’s alleged geographic market definition

- Substantial evidence in documents and business testimony of a significant out-of-market supplier response to a price increase
 - Evidence that out-of-market suppliers ship significant quantities into—and even across—the alleged markets today at prevailing prices
 - Evidence that out-of-market suppliers have significant (uncommitted) quantities available to ship into the alleged markets if reallocating shipments would increase profits
 - Evidence that out-of-market suppliers would respond to a SSNIP in the alleged market by shipping additional quantities into the market
 - Strong economic testimony of arbitrage that caused in-market and out-of-market prices to highly correlated (does not appear in opinion)

Lessons

■ Why the merging parties won

1. Successfully rebutted the DOJ's exclusion of distributors as market participants
 - Substantial evidence in documents and business testimony that distributors competed with—and were not controlled by—their refined sugar suppliers
 - Multiple examples of winning significant bids against suppliers
 - Evidence that suppliers considered distributors as competitors
 - Story as to why distributors could compete against suppliers
 - Strong supporting expert economic testimony
2. Used the right economist
 - Experienced, with a great track record
 - Reputation for independence and thoroughness
 - Helpful that Hill had significant government experience in merger analysis
3. Had a very experienced and credible industry “expert” testifying in support of transaction
 - Transaction likely to lower prices if claimed efficiencies are achieved
 - Even if the combined firm could increase prices, USDA has the tools to control price levels

Class 17 slides

Unit 11: Sysco/US Foods

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

October 27, 2022

Good things
come from
Sysco

US.
FOODS™
KEEPING KITCHENS COOKING.™

Five new concepts

1. *Cluster markets* in product market definition
2. *Targeted customer markets* in product market definition
3. Use of *overlapping draw areas* to define geographic markets
4. *Second cost auction* theory of unilateral effects
5. “Litigating the fix”

The Background

The deal

- Sysco Corporation to acquire US Foods
 - ❑ Announced December 8, 2013
 - ❑ \$3 billion of Sysco common stock (13% of combined company)
 - ❑ +\$500 million of cash
 - ❑ Assumption of \$4.7 billion of USF debt
 - ❑ Total transaction value: \$8.2 billion
 - ❑ Agreement expires September 8, 2015 (21 months)



The parties

■ Sysco

- ❑ Publicly traded “broadline” distributor
- ❑ Sales = \$44 billion in food distribution sales 2013
- ❑ #1 with about 17% of total food distribution sales nationally
- ❑ 72 distribution facilities nationwide



■ US Foods

- ❑ Privately owned broadline distributor (Clayton, Dubilier & Rice and KKR)
- ❑ Sales = \$22 billion in food distribution sales in 2013
- ❑ #2 with about 8.6% of total food distribution sales nationally
- ❑ 61 distribution facilities nationwide



Deal rationale

- Creates a company with \$65 billion in sales
 - Sysco (#1 w/17%) + USF (#2 w/8.6%) = Combined (#1 w/25.6% of total food distribution sales nationally)
 - Number 3: Performance Group (2.4%)
 - Would employ over 14,000 sales reps
 - No other company employs more than 1600
 - Would operate over 13,000 trucks
 - No other company operates more than 1600 trucks
- Immediately accretive to earnings
- Annual recurring synergies > \$600 million (after 3-4 years)
 - Eliminate duplicative overhead
 - More leverage to lower costs of goods (COGS)
 - Optimize distribution facilities and logistics
 - Integrate sales force
 - Bigger platform for enhanced innovation and development of exclusive products

Industry background

- Food service distribution
 - Total industry sales nationwide = \$231 billion (2015)
 - Supply a broad range of fresh, frozen, canned and dry food and non-food products to away-from-home food service operations
 - Customers include—
 - Independently owned single location restaurants, regional and national chain restaurants (majority of sales)
 - Hotels, motels, and resorts
 - Hospitals
 - Schools
 - Government and military facilities
 - Retail locations

Industry background

- Types of food distributors: Product range/channel
 1. Broadline
 - “One-stop” shop—carry everything
 2. Specialized
 - Meat
 - Seafood
 - Produce
 - Baked goods
 3. Systems distributors
 - “Customized” distributors for fast food, casual chain restaurants (e.g., Burger King, Wendy’s, Applebees)
 - Small number of SKUs
 - Often proprietary to chain
 - Very small sales forces
 4. Cash-and-carry and club stores
 - E.g., Restaurant Depot, Costco, Sam’s Club
 - Do not deliver
 - No sales force dedicated to individual customers
 - Typical customer: independent restaurant

Industry background

- Types of food distributors: Geographical distribution footprint
 - National
 - Regional
 - Local

Industry background

- Largest food distributors in the United States

Distributor	Distribution Footprint	Distribution Centers
Sysco	Nationwide	72
US Foods	Nationwide	61
Performance Food Group	Eastern/Southern U.S.	24
Gordon Food Service	Midwest, Florida, TX	10
Reinhart Foodservice	East, Mideast	24
Ben E. Keith Co.	Texas and bordering states	7
Food Services of Am.	Northwest	10
Shamrock Foods	Southwest, Southern Calif.	4
Local distributors	Local	1-5 each

Industry background

- Distribution centers
 - Key for broadline distribution



- 28-foot clear-height ceilings
- “Super-flat” insulated floor systems to meet strict temperature control standards
- Zoned to accommodate the storage of both perishable and dry goods

Distribution centers

- US Food distribution centers in 2017
 - Only three more centers than in 2013

A look at US Foods



250,000
Customers

350,000
SKUs

5,000
Suppliers

25,000
Employees

4,000
Sales
Associates

64
Distribution
Facilities

6,000
Trucks

GREAT FOOD. MADE EASY.

5

The FTC investigation and litigation

- FTC investigated for one year
 - Second request issued on February 18, 2014 (a little over two months after signing)
 - Investigation ended February 20, 2015
- Fix-it-first solution:
 - On February 16, 2015, Sysco signed a deal to sell 11 of 61 USF distribution centers to #3 Performance Food Group
 - Announced Feb. 16, 2015
 - Conditioned on closing main deal
 - The centers to be divested largely located in the western U.S.
 - PFG had only one center in the West
 - PFG had 24 centers in East/South
 - Accounted for \$4.5 billion in sales
 - About 20% of USF premerger sales
 - Would give PFG a total of \$10.5 billion in sales
 - Compare to \$60.5 billion for the combined firm post-divestiture
- FTC rejected the fix and brought suit
 - Joined by 11 states seeking relief under Clayton Act § 16 in their sovereign capacity
 - Parties “litigated the fix”

DOJ complaint

■ Plaintiffs:

- Federal Trade Commission
- 10 states plus the District of Columbia

■ *Filed*: February 20, 2015

- 14 months after signing

■ *Claim*: Acquisition, if consummated, would violate Section 7 in—

- Nationwide foodservice distribution to “national” customers
 - Combined first and second largest broadline foodservice distributions
 - Results in a combined share of 59%-71% share and HHI deltas of 1500-1966 (depending on metric)
 - Second cost auction unilateral effects
- 32 local markets
 - With combined shares as high as 90.3% and deltas as high as 4123
 - Second cost auction unilateral effects

■ Prayer:

- Preliminary injunction blocking the deal pending a final adjudication of the merits
- *Query*: Should the states also have sought a permanent injunction?

The District Court

- Tried in the District Court of the District of Columbia
 - Judge Amit P. Mehta
 - Appointed by President Obama
 - Assumed office: December 19, 2014
 - Assigned case: February 20, 2015



- Case was tried with the understanding that the parties would terminate their merger agreement if the PI was entered

Testifying experts

■ FTC: Dr. Mark A. Israel

- Senior Managing Director, Compass-Lexecon
- Ph.D in Economics, Stanford University (2001)
- Extensive testifying experience in antitrust cases (especially merger antitrust cases)



■ Parties: Dr. Jerry Hausman

- Professor of Economics, MIT
- D.Phil, Oxford (1972)
- Leading academic econometrician
- Extensive testifying experience in antitrust cases (including merger antitrust cases)



The District Court

- Entered the preliminary injunction blocking the deal
 - Relevant markets
 - Nationwide broadline foodservice distribution to national customers
 - Local broadline foodservice distribution to local customers
 - Anticompetitive effects (upward pricing pressure)
 - *PNB* presumption
 - Unilateral effects in the national broadline customer market
 - Unilateral effects in local broadline markets
 - Defenses insufficient to put the prima facie case into dispute
 - The PFG “fix”
 - Dealing regionally by national customers
 - Entry/expansion
 - Efficiencies
 - Equities favored the entry of a preliminary injunction

PI entered: June 23, 2015
Deal terminated: June 29, 2015

Parties abandon the merger

■ Costs to Sysco

- ❑ \$300 million breakup fee to US Foods
- ❑ \$25 million breakup fee to divestiture buyer Performance Food Group
- ❑ \$265 million to redeem financing
- ❑ \$258 million on integration planning and advisers
- ❑ \$100 million in historical financing costs, and
- ❑ \$53 million in computer systems integration

Total cost to Sysco: \$1 billion

The District Court's Analysis

Organization of opinion

- Background
- Legal standard
 - Clayton Act § 7
 - FTC Act § 13(b)
 - *Baker-Hughes* three-step burden-shifting framework
- Relevant markets
 - The relevant product market
 - Broadline distribution as a relevant product market
 - Legal principles
 - Application of *Brown Shoe* “practical indicia”
 - Expert testimony
 - Conclusion
 - Broadline distribution to “national customers” as a relevant product market
 - Legal basis
 - Evidence
 - The relevant geographic market
 - National market
 - Local markets

Organization of opinion

- Probable effects on competition
 - *PNB* presumption
 - *PNB* presumption in the national customers broadline distribution market
 - *PNB* presumption in the local broadline distribution markets
 - Additional evidence of competitive harm
 - Unilateral effects in the national customers broadline distribution market
 - Merger simulation in the national customers broadline distribution market
 - Unilateral effects in local broadline markets
 - Event studies (“natural experiments”) in local broadline markets
- Defendants’ other rebuttal arguments
 - PFG divestiture
 - Existing competition
 - Entry/expansion
 - Efficiencies
- The equities
- Conclusion

The District Court Opinion

1. The Prima Facie Case

A. Relevant Product Markets

Product markets: Allegations

- FTC position: Two product markets
 1. Broadline foodservice distribution (as opposed to all food distribution) to all customers
 2. Broadline distribution to “national” customers
- Merging parties’ position
 - All foodservice distribution (including specialty distributors)
 - Rejects a product market limited to national customers

Two new concepts here:

1. *Cluster market of nonsubstitutable products*
2. *“Targeted customer” market*

Broadline Foodservice Distribution Cluster Market

Cluster markets: Principles

- Both the FTC and the merging parties alleged *cluster markets* consisting of largely nonsubstitutable products
 - Widely accepted in the case law
 - Some examples
 - Commercial banking services, grocery stores, drug stores, department stores, consumable office supplies, acute care inpatient hospital services
- Courts have generally accepted cluster markets as relevant product markets when:
 1. The products are traditionally offered by the same seller at the same point of sale
 2. The products appeal to the same type of customer
 3. The products exhibit economies of scope in purchasing
 - Customers are attracted by the totality of the products offered at the seller's location
 - Customers tend to select sellers more on the basis of their aggregate offerings and less on the offerings of single products

NB: Generally, sellers have some flexibility in setting the prices of individual products without being constrained by competition from partial line or single product sellers, provided that the sellers remain competitive within their product offering as a whole¹

¹ We will see a case where there is single product line competition in Staples/Office Depot.

Cluster markets: Principles

■ Observations

- ❑ Not well defined in the case law, but frequently adopted by courts
- ❑ Has a “know it when you see it” quality
- ❑ Accepted “for analytical convenience” when market shares are likely to be the same across products
- ❑ Typically, analytic similarity is simply asserted rather than analyzed by courts

Cluster markets: Application in *Sysco*

- In *Sysco*, the dispute was not over whether the court should find a cluster market, but rather *what* cluster market it should find
 - *FTC*: Broadline foodservice distribution
 - *Merging parties*: All foodservice distribution, including—
 - Specialized wholesalers of meat, seafood, produce, and baked goods
 - Systems distributors for retail food chains (e.g., Burger King, Wendy's, Applebees)
 - Cash-and-carry and club stores (e.g., Restaurant Depot, Costco, Sam's Club)

Cluster markets: Application in *Sysco*

- **Court:** Broadline distribution as a product market
 - *Brown Shoe* “practical indicia” supports FTC’s definition
 1. Product breadth and diversity
 - “One-stop shop” for almost any type of customer
 - Number of SKUs carried by other types of distributors pale in comparison
 - Offer private label products
 - Customers may buy from other types of distributors on a limited basis
 2. Distinct facilities and operations
 - Massive distribution centers
 - Large sales forces
 - Run channel as a separate business
 3. Delivery
 - Timely and reliable delivery critical
 - Broadline has sufficient fleet of service vehicles to offer frequent and flexible delivery schedules to meet customer needs
 - Including next-day delivery

Cluster markets: Application in Sysco

■ Court: Broadline distribution as a product market

- *Brown Shoe* “practical indicia” supports FTC’s definition
 - 4. Customer service and value-added services
 - For example, offer menu and nutrition-meal planning services
 - Food safety training for customers at distribution centers
 - 5. Distinct customers
 - Serve a wide range of customers that other channels cannot reach
 - 6. Distinct pricing
 - Typically price only against other broadline distributors
 - Not against higher-priced specialty or lower priced cash-and-carry
 - 7. Industry or public recognition
 - Recognizes broadline as a distinct channel

NB: The Court did not strictly look at the specific indicia listed in Brown Shoe, but considered any qualitative evidence probative of cross-elasticity

Cluster markets: Application in *Sysco*

- **Court:** Broadline distribution as a product market
 - Hypothetical monopolist test supports FTC's definition
 - Israel used an aggregate diversion ratio implementation¹
 - Margin > 10% (using 10% as a lower bound is conservative since it gives a higher critical recapture rate than would the actual margins—making the HMT harder to satisfy)
 - SSNIP = 10%
 - Critical recapture formula:
$$R_{critical} = \frac{\delta}{\delta + m} = \frac{10}{10 + 10} = 0.50 = 50\%$$
 - Data for actual recapture rates
 - For each company, built tracking database that showed, for each bidding opportunity, the incumbent distributor, the winning distributor, and the competing bidders
 - Sysco: Lost 70% of the bids to another broadline distributor as opposed to another type of food distributor
 - USF: Over 70% to another broadline distributor
 - Since $R_i > 70\%$ for both Sysco and US Foods $\rightarrow R_i > R_{critical}$ and so broadline distribution is a product market
 - Rejected defendants' challenges to data and application
 - BUT agreed that the flaws in the data reduced the probative value of the test but still corroborative of result from other evidence

¹ Review the slides on one-product SSNIPs and aggregate diversion analysis in the Market Definition class notes (slides 120-53).

Cluster markets: Application in *Sysco*

- Accepted: Broadline distribution as a product market
 - Hypothetical monopolist test supports FTC's definition
 - WDC: Some questions you should be asking:
 1. The FTC's expert used the formula for uniform SSNIP recapture test. Is this the correct formula to use?
 2. Does the data used to estimate recapture rates suggest a one-product SSNIP or a uniform SSNIP?
 - The FTC used the same test that Warren–Bolton used earlier in H&R Block/ TaxACT:

$$\begin{array}{ll} \text{If } R_i^s \geq R_{Critical}^U & \text{for all firms } i \text{ in the candidate market} \\ R_i^s > R_{Critical}^U & \text{for some firm } j \text{ in the candidate market} \end{array}$$

Then the candidate market is [presumptively] a relevant market

- Warren-Bolton—and apparently Israel as well—used this as a definitive test
 - But there is no proof of the proposition as a theorem
 - There is good reason to believe that it does not work
 - At best, the test is presumptive
- What would have been the result of the analysis if the FTC's expert assumed that the data estimated one-product SSNIP diversions and used a one-product SSNIP critical recapture formula?
 - Would have failed for a 10% SSNIP: $R_{Critical} = \frac{\delta}{m} = \frac{10\%}{10\%} = 1 = 100\%$, but actual recapture ratios were between 70%-80%

Targeted Broadline Foodservice Distribution Market to National Customers

Target customer market: Allegations

- The allegations
 - *FTC*: Alleged that within the broader broadline foodservice distribution market, there existed a relevant market of “national customers”
 - *Merging parties*: Argued that there was no separate market of “national” customers
 - Can purchase more regionally or locally
 - Consortia will form to protect these customers if the combined firm seeks to act anticompetitively
 - *Query*: Is this a proper objection to the existence of a national customer targeted market?
 - *WDC*: Goes to the participants in the market, not the market’s existence

Target customer market: Application in *Sysco*

- **Court:** Broadline distribution for national customers
 - **Rule:** A relevant market can be defined by a group of customers if they can be targeted for a price increase (citing the HMG § 4.1.4)
 - Here, national customers can be readily identified
 - Given the nature of the product, there is no arbitrage among purchasers
 - **Notes**
 - The targeted customers as a group may be charged discriminatorily *lower* prices than other customers
 - Nonetheless, the Merger Guidelines and the courts recognize that an actionable anticompetitive effect occurs when, as a result of a merger, the prices to the targeted customer group is likely to be higher than they were premerger, even if they remain below the prices charged to other customers

Target customer market: Application in *Sysco*

- **Court:** Broadline distribution for national customers
 - Market supported by *Brown Shoe* “practical indicia”
 - Industry and public recognition of distinct customer needs
 - Regional broadliners have formed cooperatives to bid for national customers (formed specifically to compete against Sysco and US Foods)
 - McKinsey report (done for Sysco) and other industry research studies support national customers as a distinct customer group with distinct requirements
 - Industry trade group (International Food Distributors Association) recognizes the distinction
 - Defendants’ ordinary course of business documents support distinction
 - PROBABLY KEY: National customers testified that they would not switch to other channels to substitute for a broadline supplier
 - Aggregate diversion analysis corroborates the market
 - Analysis identical as in broadline generally
 - EXCEPT look to recapture only by broadline companies with a national footprint

Target customer market: Application in *Sysco*

- *Court*: Broadline distribution for national customers
 - Rejects defendants' arguments
 - The distinction between national and local is not arbitrary: reflects a preference by national customers for which they are willing to pay
 - National customers are identifiable—contracts are individually negotiated
 - No arbitration of products, so national customers can be charged different prices
 - Sysco and US Foods earn higher margins on sales to local customers than from sales to national customers, indicating that national customers can constrain the prices
 - *Court*: Customer testimony indicates that the lower margins more likely result from national customers playing Sysco and US Foods off each other

The District Court Opinion

1. The Prima Facie Case

B. The Geographic Markets

Geographic markets

- FTC allegations:
 1. National for broadline distribution to national customers
 2. Local for broadline generally
- Court: Legal standard
 - “[T]he area in which the goods or services at issue are marketed to a significant degree by the acquired firm” (*Marine Bancorp.*)
 - “[W]here, within the area of competitive overlap, the effect of the merger on competition will be direct and immediate” (*PNB*)
 - The Supreme Court has recognized that an “element of ‘fuzziness’ would seem inherent in any attempt to delineate the relevant geographical market,” and therefore “such markets need not—indeed cannot—be defined with scientific precision.” (*Connecticut National Bank*)
 - WDC: Could have added that the Merger Guidelines give a more precise standard using the hypothetical monopolist test

Geographic markets: Application in *Sysco*

- **Court:** Accepts national broadline market for national customers:
 - Defendants plan on a national level and have “national account” teams dedicated to national customers
 - Their contractual pricing and service terms with national customers apply across regions
 - Their competition for national customers is largely other broadliners with nationwide coverage.
 - “Although the physical act of delivering food products occurs locally, for national customers the relevant geographic area for competitive alternatives is nationwide”—given how they are:
 - Marketed
 - Sold
 - Priced
 - Serviced
 - These are essentially the same factors that established the national customer product market—No further analysis
 - Only here the Court is addressing the relevant geographic market, not the relevant product market

Geographic markets: Application in *Sysco*

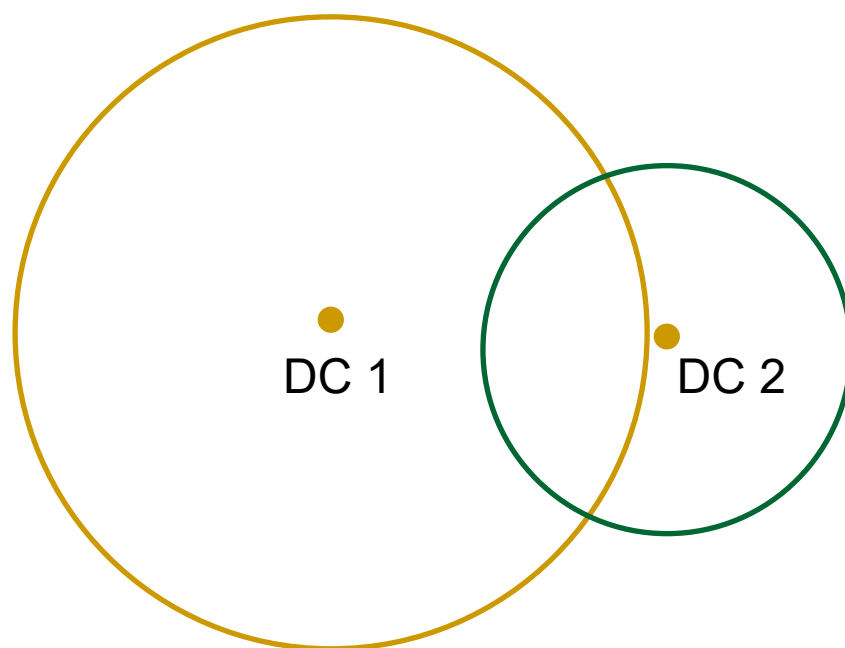
- *Court*: Accepts FTC's local markets for all broadline foodservice distribution
- FTC methodology (overlapping draw areas)
 - *Step 1*: For each distribution center, determine the radius in which the center draws 75% of its revenues ("draw areas")
 - *Step 2*: Determine the "overlap areas"—these customers will have one less alternative supplier as a result of the merger
 - *Step 3*: Identify the broadline distributors who could compete for the overlap customers (using the distributor's 75% draw radius)
 - The relevant geographic market is defined by the area encompassing the competitive distributors

While there may be substantial data problems in applying this approach and some of the parameters can be debated, the "overlapping draw areas" approach is accepted as a valid geographic market definition technique

Local headline markets

- FTC “draw area” methodology

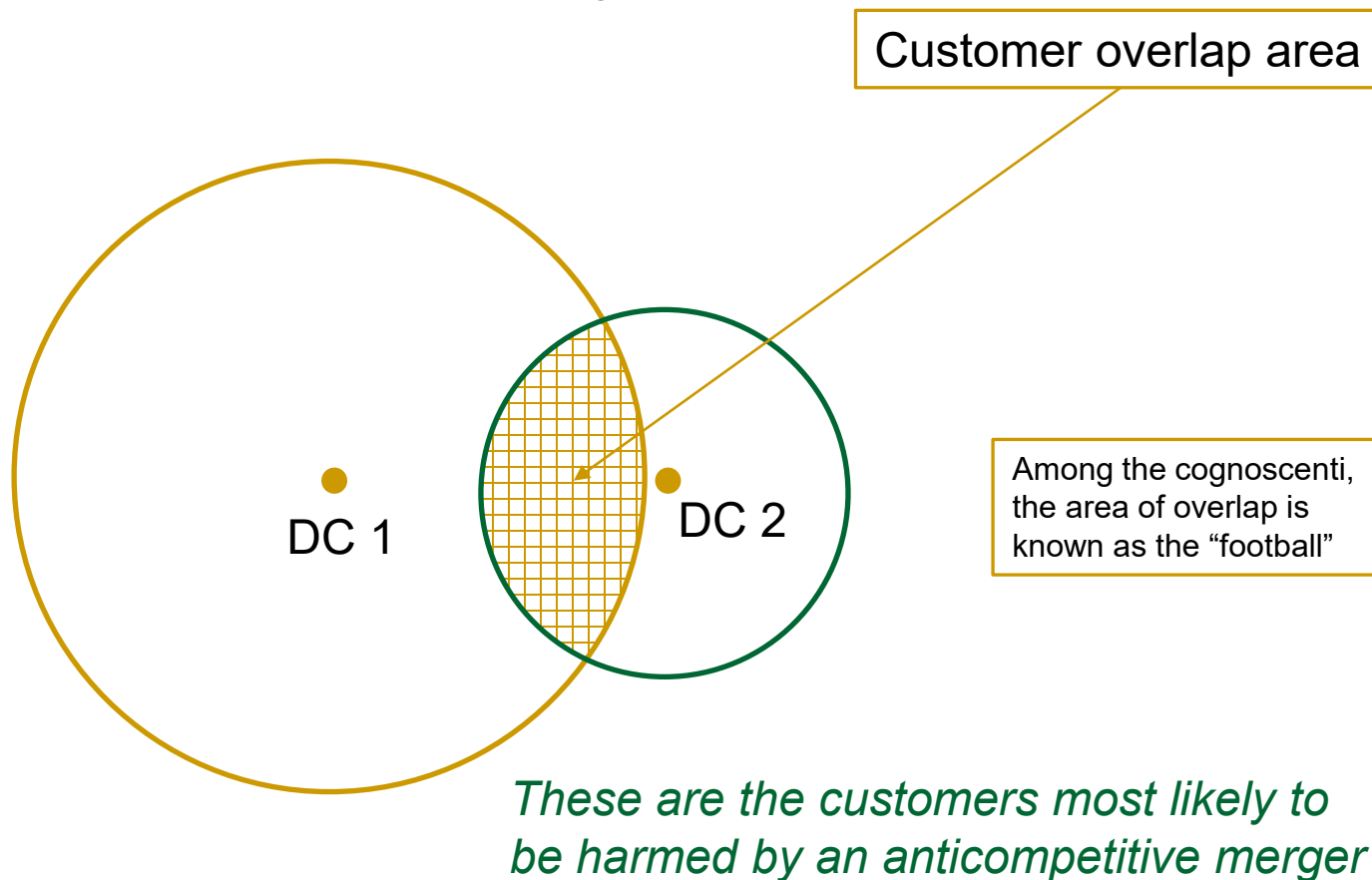
- *Step 1:* For each distribution center, determine the radius in which the center draws 75% of its revenues (“draw areas”)



The percentage of revenues that determines the draw area can be a subject of dispute. But courts and agencies commonly accept 75%-80%. Careful practitioners and economists will perform a sensitivity analysis to see if the result change significantly with different percentages

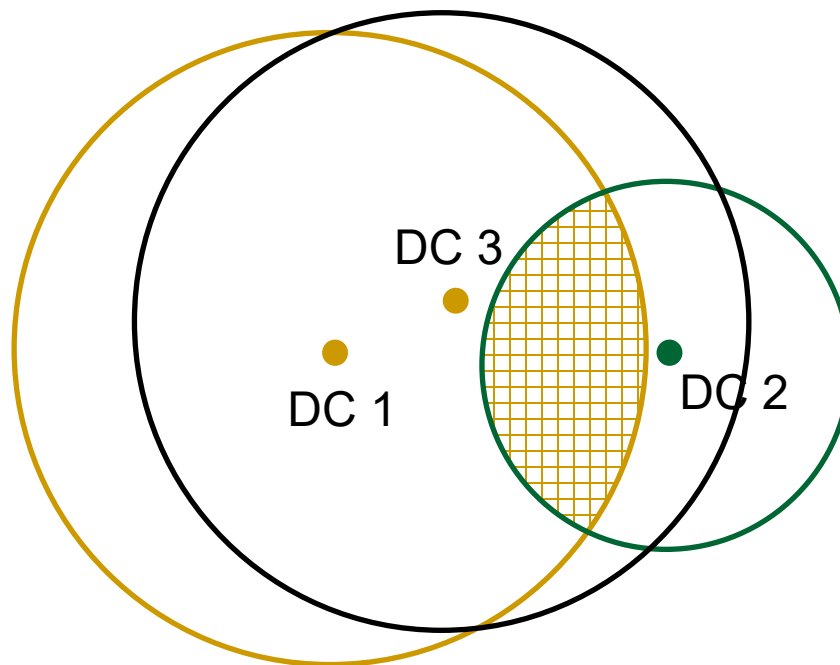
Local broadband markets

- FTC “draw area” methodology
 - *Step 2*: Determine the “overlap areas”—these customers will have one less alternative supplier as a result of the merger



Local broadband markets

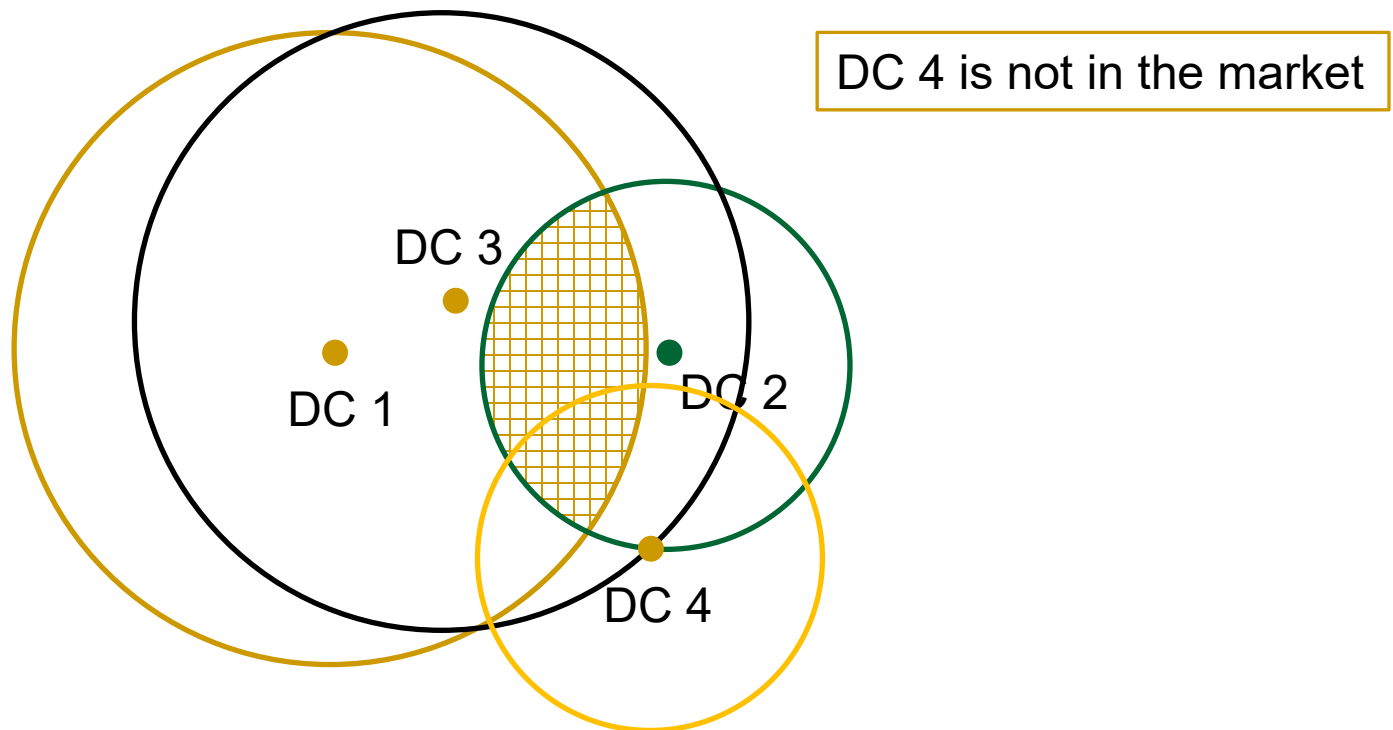
- FTC “draw area” methodology
 - *Step 3*: Identify the broadband distributors who could compete for the overlap customers (using the distributor’s 75% draw radius)



DC 3 is in the market

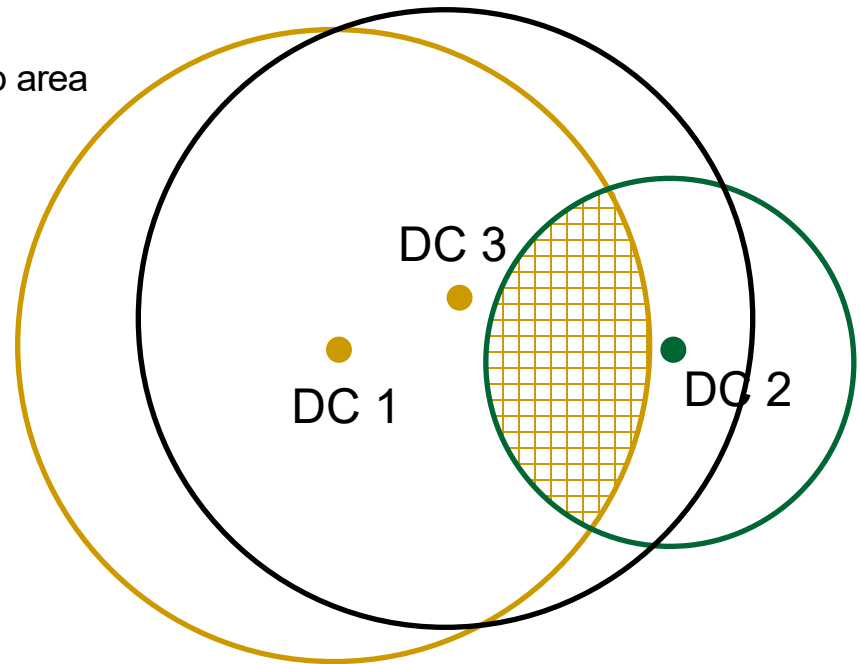
Local broadband markets

- FTC “draw area” methodology
 - *Step 3*: Identify the broadband distributors who could compete for the overlap customers (using the distributor’s 75% draw radius)



Local broadline markets

- FTC “draw area” methodology—So what is the relevant geographic market?
 - In principle, it should be defined by overlap area (the “football”)—these are the customers that are most likely to be harmed by an anticompetitive merger
 - The market participants are suppliers who could serve customers throughout the overlap area (here, firms 1, 2, and 3)
 - The market share of these participants should include:
 - Sales the distributor make in the overlap area
 - PLUS any diversion of sales into the area if prices were to increase by 5%
 - If the data does not permit this isolation, the market can be defined as the union of the three draw areas
 - Should still yield good results if suppliers will rapidly shift sales in response to a price increase in part of their sales area



Local broadline markets

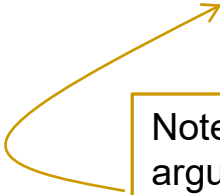
■ Defendants' response

□ Markets too small

- Some suppliers will ship into the overlap area even though it is outside their defined draw area
- By construction, 25% of a supplier's shipments will be outside its defined draw area

■ Court

- True, but the FTC's approach is a practical one that identifies areas that are likely to be competitively affected
- KEY: Also, no indication in the opinion that expanding markets to meet defendants' criticism would have materially changed the results



Note: This is typical of courts' reactions. If the merging parties are going to argue that the FTC's market definition is wrong, to be persuasive they should prove an alternative market and show that within that market the merger will not have the requisite anticompetitive effect.

The District Court Opinion

1. The Prima Facie Case

C. The *PNB* Presumption

National broadline market for national accounts

■ FTC's market shares

Table 18

Shares of Sales to National Broadline Customers, After Accounting for the Proposed
Divestiture

	Post-Divestiture Shares	Post-Divestiture HHI's	
	Combined Share	HHI	Δ HHI
Baseline	71%	5.119	1.966
(i) National	68%	4.935	1.953
(ii) National + Imputed National	65%	4.549	1.799
(iii) National + Regional	66%	4.614	1.822
(iv) National + Systems	62%	4.217	1.643
(v) National + Regional + Systems	61%	4.087	1.590
(vi) Parties' Ratio of National	59%	3.809	1.500

■ Defendants' position

- Contested methodology and inputs
- But offered no alternative calculations that showed that the *PNB* presumption was not triggered

National broadline market for national accounts

■ Court:

- “None of these arguments ultimately persuade the court that Dr. Israel’s methodology or his market shares and HHI calculations are unreliable. The FTC need not present market shares and HHI estimates with the precision of a NASA scientist. The ‘closest available approximation’ often will do.”
- Last method most persuasive:
 - Assumed that all 16 of the top broadliners had the same national-local sales ratio as defendants did.
 - Implied a combined share 59%; Delta 1500; post-HHI 3809
 - Three times the delta in *Heinz*, which the DC Circuit found sufficient by a “wide margin”
 - Also consistent with estimates suggested by business data
 - Sysco & USF largest customers alone account for more than half of total national broadline sales of \$28-\$30 billion
 - Also, smaller broadline distributors likely to have a smaller national/local sales ratio than Sysco and USF, which would overestimate the numerator and underestimate the combined firm’s share
 - Consistent with the only independent market analysis (Technomic)
- COURT: *PNB* presumption established in national broadline market

Local broadline markets

- Merger challenged in 32 local markets
- Israel's estimates
 - Metrics
 - Square footage of distribution centers
 - Local broadline sales
 - Number of sales representatives

Table 21

Examples of Areas with Large Change in HHI despite Divestitures

CBSA	Post-Merger Combined Share	Delta HHI
Omaha-Council Bluffs, NE-IA	90.3%	1,410
Sacramento--Roseville--Arden-Arcade, CA	88.6%	2,974
Durham-Chapel Hill, NC	75.4%	2,807
Charleston-North Charleston, SC	80.2%	2,947
Birmingham-Hoover, AL	57.5%	1,542
Jackson, MS	66.0%	2,155
Memphis, TN-MS-AR	93.8%	4,123
Columbia, SC	72.8%	2,315
Raleigh, NC	71.3%	2,188
Lynchburg, VA	63.3%	1,588
Rochester, NY	63.7%	1,574

Local broadline markets

■ Defendants

- Same types of arguments as before—contesting methodology and inputs
- But no alternative calculations showing that the *PNB* presumption is not applicable

■ Court:

- Numbers not perfect, but good enough to make a prima facie showing in the absence of opposition
- Defendants' challenges not persuasive → FTC has established its prima facie case

The District Court Opinion

1. The Prima Facie Case

D. Additional Evidence of Anticompetitive Effect

Additional evidence of anticompetitive effect

1. Unilateral effects in the national customer market
2. Merger simulation for the national customer market
3. Unilateral effects in local markets
4. Local event studies on unilateral effects in local markets

Unilateral effects in national customer market

■ Evidence

1. Sysco and US Foods are usually the first- and second-lowest bidders in bidding for national customer accounts
 - Israel's RFP/bidding study (7 years of data—undoubtedly obtain by subpoena by the FTC)
 - Sysco lost to USF 2.5x more than to the next closest competitor
 - USF lost to Sysco 3.5x more than to the next competitor
2. Parties' ordinary course of business documents show that they are each other's closest competitors
3. Testimony from industry participants
4. Independent market research reports

■ *Court*: Credited Israel's analysis

At this point, Israel has provided qualitative and win-loss data to predicate a unilateral effects theory, which the Court accepted as sufficient. No further quantification.

Start here

Merger simulation for national customer market

- Israel: Used “second price auction model” to estimate price increases
 - Price determined by second lowest bidder
 - The idea is that the winning bidder will just undercut the price of the second lowest bidder
 - Assumes that bidding is “descending open cry” or—more realistically in this case—that the customers negotiate with each bidder privately and in the process reveal the lowest current bid price
 - Very common in bidding situations—almost surely the prevailing practice in national food distribution
 - This is the mechanism by which customer “play off” suppliers against one another
 - If #1 and #2 merge, then #3 becomes the second bidder and the merged firm’s bid price increases to just below #3’s bid price
 - *Competitive harm*: Difference between bid prices of #2 and #3
- Can also use costs rather than prices in an auction model
 - In other situations, where the bidders do not have good expectations of their competitors’ bid prices but know their costs, the auction model can use costs.
 - The winning bidder will be the lowest cost firm to supply the customer and win at a price just below the cost of the second lowest-cost supplier to that customer.

Unilateral effects in national customer market

■ Second cost auction theory: Example

- The city of Jacksonville seeks lime for its municipal water treatment facility
- Lime is mined and processed at a lime quarry and shipped to the customers
- The cost of extracting and processing the lime is essentially the same for all suppliers, but shipping costs differ depending on the distance



□ Predicted results:

- The closest lime quarry will win the contract at a price just below the cost of supply of the second-closest quarry
- If the first and second lowest-cost supplier merge, the price will increase to just below the cost of the third lowest-cost quarry

Unilateral effects in national customer market

- *Requirements (costs version)*: The theory predicts a unilateral price increase from the merger if—
 1. The merger involves the first and second lowest-cost suppliers to one or more customers
 2. The customers can be targeted for price discrimination
 3. The third-lowest cost supplier has costs to supply the customer that are (materially) higher than the second lowest cost-supplier
 4. There are barriers to entry/expansion/repositioning that will impede a supplier postmerger from achieving the cost structure of the second lowest-cost supplier
- **Application**
 - Requires bidders to have accurate expectations of the costs of their competitors
 - NB: Can use bid prices rather than costs if bidders have good expectations of their competitor's bid prices
 - Diverted sales unilateral effects does NOT apply since there is no postmerger merger diversion/recapture of lost marginal sales

Note: We now have two distinct theories of unilateral effect:

- 1. Recapture of diverted sales (“classical unilateral effects”)*
- 2. Second price/cost auction model in bidding situations*

Merger simulation for national customer market

- Israel's evidence—Used prices, not costs
 - Company emails recognizing that—
 - Sysco and U.S. Foods are each other closest competitors, *and*
 - The next closest substitute is a very distant third
 - Quantification of model
 - Using market shares and price-cost margins, estimated annual harm to national customers = \$1.4 billion (without divestiture)
 - \$900 million w/divestiture to PFG
 - Not clear from opinion what Israel did
 - The right way to do this is to calculate, for each bidding situation where Sysco and U.S. Foods were the top two bidders, the difference between the winning bid and the third lowest bid
- Defendants' criticism—bad data
- *Court*: Recognizes data deficiencies, but model is robust and consistent with other evidence of anticompetitive effect here

Unilateral effects in local markets

- Ordinary course of business documents
 - Shows Sysco and US Foods are each other's closest competitors for local customers in jointly served markets
- Testimonial evidence more equivocal (each for particular markets)
 - *FTC testimony*: Uniquely strong competitors of one another
 - *Parties*: Other equally strong or stronger competitors for local customers
 - *Court*: "Because of conflicting local market assessments, the court cannot draw firm conclusions about the competitiveness of the local broadband markets from the testimonial evidence."
- Second price auction analysis
 - Same economic analysis as in national market
 - *Court*: Evidence is somewhat more equivocal, but still strengthens FTC's prima facie case
- Court:

Though the court finds the evidence of unilateral effects in the local markets to be less convincing than in the national customer market, the evidence nonetheless strengthens the FTC's prima facie case of merger harm.

Local event studies

■ Israel:

- Studied the effects of Sysco's opening of two distribution centers on prices paid by USF customers
 - USF operated distribution centers in the same 75% overlap area
- Long Island, NY—July 2012
 - Regression analysis showed that entry resulted in a 1.4% decrease in USF's prices
- Riverside, CA—June 2013
 - 0.6% decline

■ The idea

- If opening a merger partner's store in the draw area of the other merger partner's store lowers price, then the merger—which would eliminate competition between the stores—should increase price
- BUT opening a store puts new capacity in the market, whereas the merger will not reduce market capacity unless the combined firm closes one of the two stores
- Consequently, the quantitative price effects of opening a new store is unlikely to provide any quantitative implications of the price effects of the merger
 - *But it is directional:* If prices go up with the opening of a competitor's store, then price can be expected to go down with the merger

Local event studies

- Another problem here
 - Not “clean” studies—Sysco already had centers in these areas
 - This could have suppressed the price effect
- Israel: Interpreting the results
 - The new Riverside center was close to the existing Sysco center—so presumably price effects of Sysco’s presence had already occurred
 - By contrast, the new Long Island center was more distant to existing Sysco center and served more new business than the Riverside facility, resulting in larger price effects

Local event studies

- *Court*: Not convincing evidence that merger would harm local customers
 - Even if the Long Island study is taken at face value, the price effect is much smaller than found in other cases
 - *Staples* (1997): 13% difference in markets where Staples was not competing with another superstore
 - *Whole Foods*: WF dropped prices by 5% when another organic supermarket opened
 - “[T]he absence of convincing price effects evidence is the weakest aspect of the FTC’s case”
- *WDC*: Should FTC have presented these local event studies?

Anticompetitive effects: Conclusion

- *Court*: The FTC has presented a “compelling” prima facie case of anticompetitive effects

In summary, the FTC has bolstered its prima facie case with additional proof that the merger would harm competition in both the national and local broadband markets. Although the FTC’s case would have been strengthened with more convincing pricing effects evidence [the local event study], the court nevertheless finds that the FTC has presented a compelling prima facie case of anticompetitive effects. *See Baker Hughes*, 908 F.2d at 991 (“The more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully.”). The court now turns to Defendants’ rebuttal arguments.

The District Court Opinion

2. Defendants' Rebuttal Arguments

Four lines of rebuttal

1. Post-divestiture, PFG will replace any competition potentially lost as a result of the merger (the “fix”)
2. National customers can protect themselves by dealing more regionally
3. The entry of new competition and the repositioning of existing competitors will keep the industry competitive
4. Customers will benefit from efficiencies arising from the merger

1. The PFG “fix”

- *Defense*: Sysco’s divestiture of 11 distribution centers to PFG, could with PFG’s existing 24 distribution centers and 7 new centers to be financed by PFG’s owner, will be sufficient to ensure continued competition and negate any anticompetitive effects of the merger
 - Shortly before the FTC complaint was filed, Sysco entered into an agreement to sell 11 USF distribution centers to PFG contingent on the main deal closing
 - In addition, PFG’s owner, The Blackstone Group, committed to invest \$490 million to develop 7 more centers and increase capacity in 16 of PFG’s 24 existing centers
 - *Bottom line*: PFG would start with 35 distribution centers and eventually have 42 distribution centers

1. The PFG “fix”

- *Court*: Rejected fix as insufficient to defeat FTC’s prima facie case
 - Appears to agree that merger should be analyzed with the PFG “fix” in place
 - Determine the anticompetitive effects of the merger in the absence of the fix
 - Ask if the fix negates the anticompetitive effects
 - Does not doubt—
 - PFG management’s experience or commitment
 - Blackstone financial commitment to PFG

1. The PFG “fix”

- *Court*: Rejected fix as insufficient to defeat FTC’s prima facie case
 - BUT PFG will not be as nearly competitive post-fix as USF is premerger:
 - PFG 5-year business plan projects that PFG will have less than ½ of the national broadline sales that USF had at the time of the merger
 - Even assuming PFG will be able to integrate the 11 USF centers effectively into its operation, it will start with only 35 centers—compared to Sysco/USF > 100 centers
 - WDC: Premerger, Sysco and USF had 72 and 61 distribution centers, respectively
 - Prenegotiation PFG internal strategy documents indicated that 35 distribution would not be enough to compete effectively with Sysco and USF (court did not provide details)
 - PFG said the same to the FTC in the vetting process (obviously seeking help from the FTC in obtaining more distribution centers, but this failed)
 - New centers and expansions PFG is planning to build, while perhaps they could plug the gap, will not come online for several years at best
 - PFG lacks experience in offering value-added services to some important segments (e.g., healthcare) that both Sysco and USF have premerger
 - Significant reliance on merged firm for 3-5 years under Transition Services Agreement (cuts against PFG as a strong independent competitive force)

2. Protection through regional dealing

- *Defense*: National customers can protect themselves by dealing more regionally
 - Dealing with a single national distributor is merely a preference
 - National customers often deal with multiple sources of supply
- *Court*: Rejected defense
 - Multiple sources for some national customers are often a “one-off” phenomenon—national customers still purchase the bulk of their products from national distributors (61% to 100%)
 - Regionalization available today, but national customers are not moving in that direction—the “clear trend” is to move toward centralization in a single supplier
 - Not merely a customer preference—driven by rational business considerations:
 - Management and supply chain costs increase
 - Multiple points of sales and logistics contact
 - Multiple, different order entry/communications/IT systems
 - Multiple billing systems
 - Consistency in products can suffer (especially private label)

3. Entry/expansion

■ *Defense:*

- No technological, legal or regulatory barriers to entry or expansion
- New firms will enter or smaller incumbent firms will expand in the event of a postmerger price increase and compete prices back down to premerger levels

3. Entry/expansion

■ *Court*: Rejected defense

- Rule: To be a defense, entry must be—
 1. Timely
 2. Likely, *and*
 3. Sufficient to deter or counteract the anticompetitive effect
- *Not likely*: There exist significant barriers to entry and expansion
 - Broadline extraordinarily capital- and labor-intensive
 - New distribution center: \$35 million to build
 - + stock
 - + Delivery trucks (including expensive refrigerated trucks)
 - + People to sell the service, maintain and stock the warehouse, deliver the products, handle the back office
 - Reputation barriers
- *Not timely*
 - Even if barriers could be overcome, it would take years to enter (especially in national market)
- *Not sufficient*: Individual ability and incentive:
 - Incumbent distributors testified that they have no plans to expand to serve national customers—dissuaded by time, costs, and risk
 - If incumbent distributors will not expand, de novo entry even less likely

4. Efficiencies

- *Defense:*

- Merger will result in at least \$600 million and as much as \$1 billion in annually recurring efficiencies
- Rigorously derived:
 - Developed over 8 months involving over 100 employees at McKinsey and over 170 Sysco and USF employees

4. Efficiencies

- *Court*: Rejected defense
 - Adopted Merger Guidelines requirements:
 1. Merger specificity
 2. Verifiability
 3. Timeliness and sufficiency to negate the merger's anticompetitive effects
 - Did not question scale or rigor of analysis or accuracy of estimate
 - Not questioning verifiability
 - NOT the usual approach

4. Efficiencies

■ Court: Rejected defense

- ❑ *Question:* Have “Defendants have shown that the projected ‘merger-specific’ cost savings are substantial enough to overcome the presumption of harm arising from the increase in market concentration and other evidence of anticompetitive harm?”
- ❑ *Court:* Not persuaded
 - Not merger-specific
 - ❑ McKinsey was not hired to evaluate merger-specific efficiencies
 - ❑ McKinsey witness could not say if any of the efficiencies it identified would have occurred in the absence of the merger
 - Sysco, for example, had some projects going to achieve some of the same types of synergies that McKinsey (e.g., savings from “category management”)
 - ❑ Hausman (a defense expert) reduced number to \$490 million, but performed no independent analysis of McKinsey results
 - ❑ → Failure of proof on which merging parties bore the burden
 - Not sufficient
 - ❑ Even crediting Hausman’s estimate of \$490 million, insufficient to offset anticompetitive effect
 - ❑ <1% merged company’s annual revenue
 - ❑ So even assuming 100% was passed on to consumers, even a small increase in price could offset any cost savings (merged firm would have \$66 billion in annual sales)
 - ❑ → Failure of proof on which merging parties bore the burden
- ❑ *WDC:* Note that court did not rely on Israel’s quantification of anticompetitive harm to find that efficiencies were insufficient

The District Court Opinion

3. Determining the Net Anticompetitive Effect

Determining the net anticompetitive effect

- Unnecessary to proceed to step 3 of *Baker Hughes* since the defendants failed to produce sufficient evidence to put the prima facie case in dispute

The District Court Opinion

4. Balancing the Equities

The FTC's alleged equities

1. Public interest in effectively enforcing antitrust laws
2. Public interest in ensuring that the FTC can order effective relief if it succeeds at the merits trial—Would have to confront:
 - ❑ Consolidation of Sysco's and USF's distribution centers and infrastructure and possible departure of significant personnel (e.g., management, sales, logistics) would make it difficult to restore both parties to premerger condition, AND
 - ❑ Sale of 11 distribution facilities to PF, which presumably could not be rolled back
 - ❑ PLUS inevitable disruption to the food service industry caused by a postmerger divestiture

The defendants' alleged equities

- Public interest in allowing customers to have the advantage of the efficiencies of the transaction
 - *Court*: Rejected for failure of proof (in the efficiencies defense)
 - *WDC*: Could add that this factor could at most count the harm from the *delay* in the realization of the efficiencies if the defendants succeeded on the merits
- The public and private harm merger that would result if the merger terminates as a result of injunction, even if the merger is not anticompetitive
 - *Court*: This is a “private equity” that does not outweigh the public equities in favor of the preliminary injunction
 - *WDC*: Could add that the election to terminate the transaction and not defend on the merits was made by the parties and was not compelled

The District Court Opinion

5. Conclusion

Conclusion

■ Court:

- FTC proved a prima facie case of anticompetitive effect in two markets:
 1. Broadline distribution to national customers
 2. Broadline distribution in local markets
- Defendants failed to discharge their burden of production on any of their defenses:
 1. The PFG “fix”
 2. Protection through regional dealing (for national customers)
 3. Entry/expansion
 4. Efficiencies
- FTC showed a likelihood of success on the merits at a full trial
- Equities weighed in favor of entering a permanent injunction
- Preliminary injunction entered June 23, 2015

■ Aftermath

- Parties terminated the merger agreement terminated June 29, 2015

Unit 12: Clare's/Benny's Ice Cream Merger

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

Grading philosophy

■ My approach

1. I read all answers twice and blind grade them each time with a letter grade
2. If the grades for an answer differ significantly between the first and second reads, I read the answer for a third time and reconcile the differences
3. I rank order the exams by letter grade in descending order and apply the prescribed curve for the course
4. UNLESS the quality of the exams does not break significantly at a change in the grading curve, in which case I include the exam in question in the group to which it is most comparable (and fight with the Dean if required)

I grade on the logic, completeness, and persuasiveness of an answer, not whether you approached the problem the same way I did or reached the same outcome

I do not expect anyone to spot and properly analyze all issues in the hypothetical

Suggestion: How to approach the problem

1. Ask the setup questions
2. Read the hypothetical straight through quickly to spot the major issues
3. Read the hypothetical again more slowly
Annotate the hypothetical in the margin
4. Outline an answer—pay attention to your intuitions!
5. Start writing

Another suggestion:

***DISTINGUISH BETWEEN MAJOR
AND SUBSIDIARY ISSUES!!***

Be sure you are able to address all the major issues. If you do not think you are going to have time to do everything, spot the subsidiary issues and leave the detailed analysis until later. Since you will type the exam in Word, it is easy to insert additional material after you finish the important topics.

1. Ask the setup questions

1. Who are you/what role are you being asked to play?
2. What is the transaction?
3. What is the form of the work product?
4. What questions are you being asked to address?
5. What statutes(s) apply?

1. Ask the setup questions

1. Who are you/what role are you being asked to play?
 - From the hypothetical:

You are an attorney at the FTC and your group is reviewing Clare's pending acquisition of Bennie's, two manufacturers of ice cream. The acquisition is for all cash transaction and Clare's is paying a 40% premium for the Benny's stock. Melissa Brown, your section chief, has asked you to prepare a recommendation as to whether the FTC should seek a preliminary injunction blocking the transaction from a federal district court pending a resolution of an administrative trial. In particular, Ms. Brown is seeking your analysis of how strong the FTC's prima facie case of a Section 7 violation is likely to be and whether the FTC can defeat defenses the merging parties have said that they will advance. Ms. Brown also would like you to address how the court is likely to balance the equities and what the court is likely to decide on the FTC's petition to enter the preliminary injunction.

1. Ask the setup questions

2. What is the transaction?

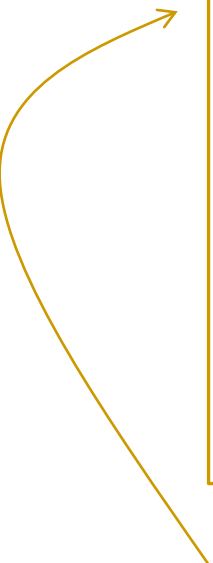
- From the hypothetical:

You are an attorney at the FTC and your group is reviewing **Clare's pending acquisition of Bennie's, two manufacturers of ice cream. The acquisition is for all cash and Clare's is paying a 40% premium for the Benny's stock.** Melissa Brown, your section chief, has asked you to prepare a recommendation as to whether the FTC should seek a preliminary injunction blocking the transaction from a federal district court pending a resolution of an administrative trial. In particular, Ms. Brown is seeking your analysis of how strong the FTC's prima facie case of a Section 7 violation is likely to be and whether the FTC can defeat defenses the merging parties have said that they will advance. Ms. Brown also would like you to address how the court is likely to balance the equities and what the court is likely to decide on the FTC's petition to enter the preliminary injunction.

1. Ask the setup questions

3. What is the form of the work product?

- From the hypothetical:



You are an attorney at the FTC and your group is reviewing Clare's pending acquisition of Bennie's, two manufacturers of ice cream. The acquisition is for all cash transaction and Clare's is paying a 40% premium for the Benny's stock. **Melissa Brown, your section chief, has asked you to prepare a recommendation** as to whether the FTC should seek a preliminary injunction blocking the transaction from a federal district court pending a resolution of an administrative trial. In particular, Ms. Brown is seeking your analysis of how strong the FTC's prima facie case of a Section 7 violation is likely to be and whether the FTC can defeat defenses the merging parties have said that they will advance. Ms. Brown also would like you to address how the court is likely to balance the equities and what the court is likely to decide on the FTC's petition to enter the preliminary injunction.

You are being asked to write a **reasoned memorandum of law** with a recommendation

Every question I have asked on an exam to date calls for a reasoned memorandum of law

1. Ask the setup questions

4. What questions are you being asked to address?

- From the hypothetical:

1
2
3
4
5

You are an attorney at the FTC and your group is reviewing Clare's pending acquisition of Bennie's, two manufacturers of ice cream. The acquisition is for all cash transaction and Clare's is paying a 40% premium for the Benny's stock. Melissa Brown, your section chief, has asked you to prepare a recommendation as to **whether the FTC should seek a preliminary injunction blocking the transaction** from a federal district court pending a resolution of an administrative trial. In particular, Ms. Brown is seeking your analysis of **how strong the FTC's prima facie case of a Section 7 violation is likely to be** and **whether the FTC can defeat defenses the merging parties** have said that they will advance. Ms. Brown also would like you to address **how the court is likely to balance the equities** and **what the court is likely to decide** on the FTC's petition to enter the preliminary injunction.

- Five questions are presented

BE SURE THAT YOU ADDRESS EACH QUESTION!!

1. Ask the setup questions

5. What law(s) apply?

- From the hypothetical:

1

You are an attorney at the FTC and your group is reviewing Clare's pending acquisition of Bennie's, two manufacturers of ice cream. The acquisition is for all cash transaction and Clare's is paying a 40% premium for the Benny's stock. Melissa Brown, your section chief, has asked you to prepare a recommendation as to whether the FTC should seek a **preliminary injunction blocking the transaction from a federal district court pending a resolution of an administrative trial**. In particular, Ms. Brown is seeking your analysis

2

of how strong the FTC's prima facie case of a **Section 7 violation** is likely to be and whether the FTC can defeat defenses the merging parties have said that they will advance. Ms. Brown also would like you to address how the court is likely to balance the equities and what the court is likely to decide on the FTC's petition to enter the preliminary injunction.

- *For 1:* FTC Act 13(b) for the standards for entering a preliminary injunction
- *For 2:* Clayton Act § 7 for the elements of the substantive violation

2. Quick read to spot the issues

- The problem will have multiple issues
- Some issues will be substantively more important than others
- DO NOT get hung up spending too much time on the small issues at the cost of not adequately addressing the major issues

So what do I need to spot?

Typical structure of a formal merger analysis

■ Part 1: The prima facie case

- Relevant product market
 - *Brown Shoe* “outer boundaries” and “practical indicia” for the product market
 - Merger Guidelines hypothetical monopolist test
 - *Homogeneous products*: Critical loss implementations
 - *Differentiated products*: One-product/uniform SSNIP recapture implementations
- Relevant geographic market
 - “Commercial realities” test
 - Merger Guidelines hypothetical monopolist test
- *PNB* presumption
 - Market participants and market shares
 - Applicability of the *PNB* presumption
 - Judicial precedent support
 - Merger Guidelines support
- Other evidence of anticompetitive effect
 - Unilateral effects
 - Coordinated effects
 - Elimination of a maverick
 - [Foreclosure/raising rivals’ costs for vertical transactions]

Effectively to show gross upward pricing pressure or other anticompetitive effect

Typical structure of a formal merger analysis

■ Part 2: Defendants' rebuttal

- Direct challenges to prima facie case (no upward pressing pressure)¹

- Traditional defenses (offsetting downward pricing pressure)

- Entry/expansion/repositioning
- Efficiencies
- Countervailing buyer power ("power buyers")
- Failing company/division

Effectively to show sufficient gross downward pricing pressure to create a genuine issue of fact on the merger's net competitive effect

■ Part 3: Balancing (if necessary)

- *A/so*, in this problem you will need to address the standards for the entry of a Section 13(b) preliminary injunction

- Likelihood of success on the merits (addressed about)

- Weighing the equities/public interest

Do not forget this!

¹ Often addressed in Step 1.

3. Annotate/Outline

■ Some facts to note:

- ❑ Clare's is acquiring Benny's
- ❑ There are two types of ice cream: premium and regular
- ❑ Although prices within each segment have converged, they have varied in the past → *differentiated products* → look out for one-product SSNIP tests/unilateral effects
- ❑ The merger is horizontal in premium ice cream; no overlap in regular ice cream
- ❑ Premium ice cream is dominated by two firms: Al's and Benny's
- ❑ Two dimensions of competition: Price and innovation
- ❑ Al's has been a price leader in premium ice cream
 - Clare's has been a maverick in prices and innovation
 - All other premium ice cream producers have been followers
- ❑ Postmerger, Clare's will consolidate its premium brand into Benny's → eliminates differentiation
- ❑ AND become tied with Al's as the No. 1 premium ice cream manufacturer (45% share each)
- ❑ High cross-elasticity of demand within each of premium and regular
- ❑ Significant product and price differentiation between premium and regular
- ❑ Significant technological supply-side substitutability between premium and regular
 - BUT no (recent) entry into premium by regular ice cream producers → indicates high reputational barriers
 - AND little growth in market shares by small premium companies (including Dino's) → same
- ❑ Uniform nationwide shipments and pricing → suggests a national geographic relevant market
 - Insignificant amount of store brands (which may be local) → further indicates national market
- ❑ All cost savings are in fixed costs → No cognizable efficiencies

3. Annotate/Outline

- Note some numbers and important facts:

The industry recognizes two types of ice cream: premium ice cream and regular ice cream. Premium ice cream has more butterfat content, less overrun (that is, less air, which makes it more creamy), and more calories than regular ice cream. Premium and regular ice cream are made on the same machines. Switching is gallon-for-gallon and involves negligible switching costs. The marginal costs of producing premium and regular ice cream, however, differ because of the difference in the cost of ingredients. The marginal cost of producing premium ice cream is \$2.80 per gallon, while the cost of producing regular ice cream is \$2.40 per gallon. Marginal costs, which are constant, have not changed in recent years and are not expected to change in the future.

While prices can and have varied among brands with in both premium and regular ice cream, actual prices charged by manufacturers during the investigation have converged—with no sign of collusion—throughout the country to \$4.00 per gallon for premium ice cream and \$3.00 per gallon for regular ice cream. The following chart give sales for ice cream manufacturers:

$$\begin{aligned} MC_P &= \$2.80 \\ MC_R &= \$2.40 \end{aligned}$$

$$\begin{aligned} P_P &= \$4.00 \\ P_R &= \$3.00 \end{aligned}$$

$$M_P = \$1.20$$

$$M_R = \$0.60$$

$$\%M_P = \frac{1.20}{4.00} = 30\%$$

$$\%M_R = \frac{0.60}{3.00} = 20\%$$

3. Annotate/Outline

- Note some numbers and important facts:

There are high cross-elasticities of demand between brands within each of the two ice cream segments and low cross-elasticities between individual products in different segments. So, for example, if a premium ice cream manufacturer were to increase its price while the other premium ice cream manufacturers held their prices constant, the higher-priced manufacturer would lose a significant amount of volume to its premium brand rivals and little, if any volume to regular ice cream. The same is true for regular ice cream brands.

$$R_i = 100\%$$

For a 5% uniform increase in the price across all brands of premium ice cream, however, each premium brand would lose 16% of its unit sales to regular ice cream and none to other brands of premium ice cream or non-ice cream products. For a 5% uniform increase in the price of all brands of regular ice cream, each regular brand would lose 7.5% of its unit sales to premium ice cream and none to other brands of regular ice cream or non-ice cream products. When the price of all brands of ice cream (premium and regular) is increased by 5%, there would be no switching between premium and regular brands of ice cream, but each brand of premium ice cream would lose 3% of its unit sales to non-ice cream alternatives, while each brand of regular ice cream would lose 5% of its unit sales to non-ice cream alternatives.

~~cross-segment loss~~

$$L_P = 16\%$$

TO REG.

$$L_R = 7.5\%$$

TO PREM.

L_{All} :

$$L_P = 3\%$$

$$L_R = 5\%$$

Clare's (the buyer) is the largest manufacturer of regular ice cream and the third largest manufacturer of premium ice cream. Benny's (the target) is the second largest manufacturer of premium ice cream but manufactures no regular ice cream. In its meeting the staff, Clare's made the following arguments in defense of the transaction:

4. Write

- Be organized:

Exam instructions:

Present your analysis in a well-organized, linear, and concise manner. Think about your answers before writing. *Remember Pascal's apology:* "I am sorry that this was such a long letter, but I did not have the time to write you a short one." Clarity of thinking and exposition are much more important than throwing in the kitchen sink. Penalties will be levied for excessive length, verbosity, or lack of organization.

- Prepare in advance

Exam instructions:

As we discussed in class, you may copy and paste short passages from **"cheat sheet" you have created** to introduce a rule of law, a legal principle, or an economic proposition or formula. You may include quotes from cases in the materials you create for this purpose, but if you do so prepare the quote and cite the case as you would in a brief. Do NOT copy and paste from any other materials.

4. Write: Introduction

- Opening paragraph to a memorandum: “You have asked me”

To: Melissa Brown

From: Dale Collins

Clare’s/Benny’s Ice Cream Merger

You have asked me to assess whether the FTC should be able to obtain a preliminary injunction blocking the pending acquisition by Clare’s of Benny’s, two manufacturers of ice cream, from a federal district court pending a resolution of an FTC challenge in an administrative trial. In particular, you have asked me to assess how strong the FTC’s prima facie case of a Section 7 violation is likely to be and whether the FTC can defeat defenses the merging parties have said that they will advance. You have also asked me to address how the court is likely balance the balance the equities and what the court is likely to decide on the petition to enter the FTC’s preliminary injunction.

You should be able to copy most of this from the exam pdf¹

¹ For copying text from a PDF file using Adobe Acrobat Reader, see [Copy text and images from PDFs](#). If you have not done this in the past, you should practice before the exam.

4. Write: Introduction

- Short conclusion
 - ANSWER EACH QUESTION ASKED
 - Be succinct
 - You can write the short conclusion last—but if you did a good outline, you can do a first draft now of the introduction
 - Helpful to you and to me
 - Ensures that you answer all the questions asked
 - Gives me a roadmap as to where your analysis is going

4. Write: Introduction

- Short conclusion—Instructor's answer

1

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. The court should find that the entry of a preliminary injunction is in the public interest.

4. Write: Introduction

■ Short conclusion—Instructor's answer

2

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. **On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream.** The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. The court should find that the entry of a preliminary injunction is in the public interest.

4. Write: Introduction

■ Short conclusion—Instructor's answer

3

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. **The PNB presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger in both markets.** The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. The court should find that the entry of a preliminary injunction is in the public interest.

4. Write: Introduction

■ Short conclusion—Instructor's answer

4

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. **The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create.** The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. The court should find that the entry of a preliminary injunction is in the public interest.

4. Write: Introduction

■ Short conclusion—Instructor's answer

5

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. **The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction.** The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. The court should find that the entry of a preliminary injunction is in the public interest.

4. Write: Introduction

■ Short conclusion—Instructor's answer

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. **The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits.** The court should find that the entry of a preliminary injunction is in the public interest.

6

4. Write: Introduction

■ Short conclusion—Instructor's answer

For the reasons explained below, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction. On the facts found in the investigation, the Commission has a strong likelihood of being able to prove to the district court that Clare's proposed acquisition of Benny's would violate Section 7 in the nationwide manufacture and sale of premium ice cream and separately in the nationwide manufacture and sale of all ice cream. The *PNB* presumption is easily satisfied in premium ice cream, and although more borderline in all ice cream, there is additional evidence of consumer harm resulting from both anticompetitive unilateral and coordinated effects. Consumers are likely to be harmed by both an increase in prices and a reduction in the rate of product innovation as a result of the merger. The various defenses advanced by the parties are either speculative (not verifiable), contradicted by the facts, or fail to show they are sufficient to negate the upward pricing pressures and the reduced incentives to innovate that the merger is likely to create. The equities, especially the public's interest in effective antitrust enforcement and effective relief, weigh heavily in favor of entering a preliminary injunction. The equities weighing against the entry of the injunction are at most only the delay in the receipt of the private monetary benefits of the merger to the merging parties and their shareholders and these benefits will never materialize if the merger is found to be unlawful on the merits. **The court should find that the entry of a preliminary injunction is in the public interest.**

7

4. Write: Introduction

- Applicable law
 - Clayton Act § 7
 - FTC Act § 13(b)
 - *Baker Hughes* three-step burden-shifting approach

4. Write: Introduction

- Applicable law

- Clayton Act § 7

- Instructor's answer (prepared in advance):

Section 7 of the Clayton Act prohibits mergers and acquisitions “where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.” 15 U.S.C. § 18. By its terms, a Section 7 violation contains three essential elements: (1) a relevant product market (“line of commerce”), (2) a relevant geographic market (“section of the country”), and (3) a reasonably probable anticompetitive effect in the relevant market (that is, the combination of the relevant product market and the relevant geographic market).

- The exam instructions state that you may assume that the requisite interstate nexus exists to apply Section 7
 - You do not have to address the interstate commerce requirement explicitly

4. Write: Introduction

- Applicable law
 - FTC Act § 13(b)
 - Instructor's answer (prepared in advance):

The Commission may seek injunctive relief to enjoin a transaction pending the resolution of the Section 7 merits in an administrative proceeding under Section 13(b) of the Federal Trade Commission Act “[u]pon a proper showing that, weighing the equities and considering the Commission’s likelihood of ultimate success, such action would be in the public interest.” 15 U.S.C. § 53(b). The public interest standard requires courts to “measure the probability that, after an administrative hearing on the merits, the Commission will succeed in proving that the effect of the [proposed transaction] may be substantially to lessen competition” in violation of the Clayton Act. *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 22 (D.D.C. 2015). The Commission meets this standard if it “has raised questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance and ultimately by the Court of Appeals.” *Id.* at 23.

4. Write: Introduction

■ Applicable law

- *Baker Hughes* three-step burden-shifting approach
 - Instructor's answer (form prepared in advance):

Clare's acquisition of Benny's is a horizontal acquisition since it involves competitors in the production and sale of ice cream generally and premium ice cream in particular. In horizontal cases, courts have adopted a three-step burden-shifting procedure:

1. The plaintiff bears burden of proof in market definition and in market shares and market concentration within the relevant market sufficient to trigger the *PNB* presumption (explained below).
2. Once the plaintiff has made a prima facie showing, the burden of production then shifts to defendant to adduce evidence sufficient to put the *PNB* presumption in issue.
3. If the defendant discharges its burden, the burden of persuasion returns to plaintiff to prove in light of all of the evidence in the record that the merger is reasonably probable to have an anticompetitive effect in the relevant market.

See *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982-83 (D.C. Cir. 1990). Although not required, the plaintiff may strengthen its prima facie case by presenting additional evidence supporting a finding that the transaction is anticompetitive. Courts apply a "sliding scale" approach to the defendant's burden in Step 2 above, so that the stronger the plaintiff's prima facie case, the higher the defendant's showing must be to discharge its burden of production for putting the plaintiff's prima facie case in issue. *Id.* at 983.

4. Write: Introduction

■ The roadmap

□ Instructor's answer (form prepared in advance):

The DOJ/FTC 2010 Horizontal Merger Guidelines focus more on competitive effects and do not strictly require a showing of a relevant market. To obtain a preliminary injunction, however, the Commission will have to petition a federal district court, which will require the showing of a relevant market under prevailing case law precedent. As to the showing of anticompetitive effects, the courts continue to employ the *Philadelphia National Bank* presumption in assessing a prima facie case and also have largely accepted the theories of anticompetitive harm in the Merger Guidelines to further support the prima facie case. Accordingly, I will analyze the transaction under the usual judicial framework:

1. The prima facie Section 7 case
 - a. The relevant product market
 - b. The relevant geographic market
 - c. Market shares, concentration, and the *PNB* presumption
 - d. Additional evidence supporting the prima facie case
2. The defendants' arguments
3. Conclusion on Section 7 legality
4. Weighing of the equities
5. Conclusion

4. Write: The prima facie case

■ The relevant product market

1. Premium ice cream only

- *Brown Shoe* “outer boundaries” and “practical indicia” (test and application)
- Hypothetical monopolist test (test and application through one-product SSNIP recapture test)

2. All ice cream

- *Brown Shoe* “outer boundaries” and “practical indicia”
- Hypothetical monopolist test (test and application through percentage critical loss)

Do not get lost in the details. Think about what your intuitions tell you are the correct relevant markets. When you do the details (especially the HMT), if you are getting an answer different from your intuitions, double check your work!

□ Note:

- It was unnecessary to analyze a regular ice cream market
 - There is no overlap in regular ice cream—and we have only looked at theories of harm in horizontal mergers
 - Incidentally, there is no nonhorizontal theory of harm that applies to a regular ice cream market either

4. Write: The prima facie case

- The relevant product market
 - Premium ice cream only—*Brown Shoe*
 - “Outer boundaries” test
 - Very high cross-elasticities/diversion ratios/recapture ratios within the candidate market
 - Little diversion to outside the candidate market for one-product price increases
 - Practical indicia
 - Industry recognition of premium ice cream as distinct from regular ice cream
 - Premium ice cream has differentiating characteristics (namely, more butterfat content, less overrun, and more calories than regular ice cream)
 - Premium ice cream costs more to manufacture (\$2.80 v. \$2.40 per gallon)
 - Probably most importantly, premium ice cream has—
 - a significantly higher price (\$4.00 v. \$3.00 per gallon at wholesale), *and*
 - a 50% higher percentage margin ($30\% = 1.20/4.00$ v. $20\% = \$0.60/\3.00)

4. Write: The prima facie case

■ The relevant product market

□ Premium ice cream only—Hypothetical monopolist test

- This is a differentiated candidate market, so use a recapture test rather than a critical loss test

1. One-product SSNIP recapture test for *symmetric products*:

$$R_{Critical}^i = \frac{\delta}{m} = \frac{5\%}{30\%} = 16.67\%.$$

Make sure you understand the inequalities! Actual recapture *greater* than critical recapture means that the hypothetical monopolist is recapturing enough customers to make the SSNIP profitable

Here, $R_{Clare's}$ and $R_{Benny's}$ are close to 100% (need at least one of the products subject to the SSNIP to be a product of a merging firm), so the one-product SSNIP recapture test is satisfied, and premium ice cream is a relevant market

2. You could also have used the general formula for products regardless of differences in prices and margins:

$$R_{Critical}^1 = \frac{\$SSNIP_1}{\$m_{RAve}} = \frac{0.20}{1.20} = 16.67\%,$$

where $\$m_{RAve}$ is the diversion share-weighted average of the dollar margins of the recapturing firms

- Diversion share-weighted averages where part of the optional material in this course
- BUT note that in a two-product market, the equation for the critical recapture ratio for product 1 reduces to:

$$R_{Critical}^1 = \frac{\$SSNIP_1}{\$m_2}$$

4. Write: The prima facie case

■ The relevant product market

□ Premium ice cream only—Hypothetical monopolist test

3. Or brute force accounting: Apply SSNIP to Clare's (or Benny's)

NB: This is standard critical loss for Clare's

Gain on inframarginal sales

	Premium	
\$SSNIP =	\$0.20	Calculated from hypothetical
% Δq =	25.00%	"a significant amount" (pick a number)
q =	43.80	from hypothetical (table)
$\Delta q = \% \Delta q \times q =$	10.95	
$q_2 = q - \Delta q =$	32.85	
Gain =	6.57	

G

Loss on marginal sales

$\$m = p - c =$	1.20	Calculated from hypothetical
$\Delta q =$	10.95	
Loss =	13.14	
NET (Clare's) =	-6.57	should be negative if Clare's is profit maximizing

L

Gain on recapture

$R_i =$	100.00%	from hypothetical
Recapture = $R_i \times \Delta q =$	10.95	
$\$m_o =$	\$1.20	from hypothetical
Recapture gain =	\$13.14	
NET HM =	\$6.57	

R

4. Write: The prima facie case

■ The relevant product market

□ Premium ice cream only—Hypothetical monopolist test

- If you had used a critical loss test, the candidate market would have failed
- Percentage critical loss to test the profitability of a uniform SSNIP:

$$\%CL = \frac{\delta}{\delta + m} = \frac{5\%}{5\% + 30\%} = 14.3\%.$$

- But the actual loss is 16%. Therefore, the test fails.

Again, make sure you get the inequalities right! Actual loss greater than critical loss means that the hypothetical monopolist loses too many customers to make the SSNIP profitable

Only one test needs to pass. If the candidate market passes one test but fails other tests, it is still a relevant market under the Merger Guidelines

If a candidate market supported by the Brown Shoe factors fails the HMT:

- 1. Check your math*
- 2. See if there are other implementations (e.g., one-product SSNIP test)*

4. Write: The prima facie case

■ The relevant product market

□ Premium ice cream only—Hypothetical monopolist test

■ Applying the uniform SSNIP test

- *Test:* If all the uniform recapture ratios are equal to or greater than the critical recapture ratio for all products and strictly greater than the critical recapture ratio for at least one product, then the hypothetical monopolist could profitably increase the prices by a uniform SSNIP

■ Determine the critical uniform recapture ratio $R_{Critical}^U$:

$$R_{Critical}^U = \frac{\delta}{\delta + m} = \frac{5\%}{5\% + 30\%} = 14.3\%$$

■ Determine the actual uniform recapture ratios R_i^U for each product i in the candidate market (there are different from the one-product SSNIP recapture ratios!)

- The problem states: “if the prices of all premium ice cream products were increased uniformly by a SSNIP, each premium brand would lose 16% of its unit sales to regular ice cream and *none to other brands of premium ice cream* or non-ice cream products.”
- This tells you that $R_i^U = 0$ for all the products in the premium ice cream candidate market

■ The test FAILS

The key to remember is that retained inframarginal sales are NOT recaptured sales.

Recaptured sales are lost marginal sales that divert to another product in the candidate market.

4. Write: The prima facie case

■ The relevant product market

□ All ice cream—*Brown Shoe*

■ “Outer boundaries” test

- The cross-elasticity between the two *categories* of ice cream products is relatively high
 - Premium ice cream as a category diverts almost 100% diversion to regular ice cream
 - Regular ice cream as a category diverts almost 100% diversion to premium ice cream

■ Practical indicia

- Industry and the public recognition of ice cream as distinct from other types of foods
- Ice cream has peculiar characteristics and uses
- Ice cream is produced using unique production facilities
- Ice cream has distinct prices

4. Write: The prima facie case

■ The relevant product market

□ All ice cream—Hypothetical monopolist test

■ Easy answer:

- *Rule:* With selective SSNIPs and the elimination of the smallest market principle, if a candidate market satisfies the HMT, then any superset of that candidate market satisfies the HMT
- *Application:* Since we have already shown that premium ice cream satisfies the HMT, then all ice cream satisfies the HMT
- You do not need to say anything more than this

■ Could also use a critical loss for a uniform SSNIP:

$$\%CL_{\text{premium}} = \frac{5\%}{5\% + 30\%} = 14.3\%$$

$$\%CL_{\text{regular}} = \frac{5\%}{5\% + 20\%} = 20.0\%,$$

Actual loss for premium ice cream and regular ice cream is 3% and 5%, respectively.

■ That is, with a 5% SSNIP—

- The hypothetical monopolist would make money on premium ice cream, *and*
 - The hypothetical monopolist would make money on regular ice cream
- Therefore, the hypothetical monopolist could profitably raise prices by a 5% SSNIP, and so all ice cream is a relevant product market

4. Write: The prima facie case

- Suggestions on applying the hypothetical monopolist test
 - Be sure you know the “accounting” principles
 - Every problem can be tested through brute force accounting

If you are not sure of the formula to use, use brute force accounting

- Do NOT spin your wheels on the HMT

If you are having problems, make sure that your Brown Shoe analysis makes common sense in the context of the hypothetical, assume that this is the relevant market, and leave a hole in the answer to fill in after you finish the rest of the memorandum

It is better to have a hole in the HMT than to leave other major issues inadequately addressed (much less unaddressed)

4. Write: The prima facie case

- More thoughts on applying the hypothetical monopolist test
 - Don't forget that you can apply the one-product SSNIP recapture test to product groups
 - Say you have two homogeneous product groups that are differentiated from each other groups (blue cars and red cars)
 - Suppose further that you have uniform SSNIP diversion ratios for each group to the other group
 - You can test each group using critical loss and test the combined group using a one-product "group" SSNIP recapture test (i.e., treat each group as if it were an individual product. Since all the prices and margins are the same for all products within the group, it does not matter what the diversion ratios are to individual products)
 - Special case:
 - Suppose one homogeneous product group satisfies the HMT
 - Suppose a second homogeneous product group is also symmetrical but differentiated from the first group, and that the second product group fails the HMT
 - Proposition: When the two groups are combined, they satisfy the HMT regardless of the diversion ratios from one group to the other
 - Just increase the price of blue cars and hold the price of red cars constant—the hypothetical monopolist makes a positive profit on blue cars and the financials on red cars are unchanged except some any recapture (which is unnecessary)
 - REMEMBER: At least one product of a merging firm must be subject the SSNIP in a one-product SSNIP recapture test

4. Write: The prima facie case

- The relevant geographic market
 - The United States
 - The “area of effective competition” test (test and application)
 - Nationwide sales by majors
 - Uniform nationwide pricing by majors
 - Insignificant amount of store brands (which may be local)
 - Hypothetical monopolist test—performed above
 - Remember, the HMT always needs a relevant product market and a relevant geographic market

4. Write: The prima facie case

- Market shares, concentration, and the *PNB* presumption
 - *PNB* presumption (boilerplate for judicial presumption and Merger Guidelines)
 - Use revenues for market shares
 - If you are going to be testing for an all ice cream market, products are differentiated in prices
 - No nonsellers in premium ice cream
 - Although technologically easy and inexpensive to switch, significant reputational barriers
 - Despite Clare's and Dino's aggressive efforts to grow in premium ice cream, neither was able to obtain more than a 5% market within three years of entry
 - Significant price differential (\$4.00 v. \$3.00) and especially the margin differential (30% v. 20%) between premium ice cream and regular ice cream not competed away by supply-died switching
 - Clare's is purchasing Benny's because it did not believe it could grow its market share significantly in the coming years on its own → high reputational barriers

4. Write: The prima facie case

- Market shares, concentration, and the *PNB* presumption
 - Applying the *PNB* presumption:

Premium Ice Cream

	Revenues (\$millions)	Share	HHI
Al's	\$1,575	45.00%	2025
Benny's	\$1,400	40.00%	1600
Clare's	\$175	5.00%	25
Dino's	\$175	5.00%	25
Eddy's	\$35	1.00%	1
Breyers	\$35	1.00%	1
Blue Bell	\$35	1.00%	1
Izzy's	\$35	1.00%	1
Wells	\$35	1.00%	1
	<hr/>		
	\$3,500	100.0%	3680
Combined share		45.0%	
Delta			400
Postmerger HHI			4080

45%, $\Delta = 400$, postmerger HHI = 4080
 Strong HHI and judicial precedent
 case (including surpassing thresholds
 in *PNB*)

All Ice Cream

	Revenues (\$millions)	Share	HHI
Clare's	\$5,000	26.7%	713
Breyers	\$4,800	25.6%	657
Al's	\$4,000	21.4%	456
Benny's	\$1,400	7.5%	56
Turkey Hill	\$900	4.8%	23
Blue Bell	\$650	3.5%	12
Izzy's	\$450	2.4%	6
Wells	\$300	1.6%	3
Dino's	\$175	0.9%	1
Eddy's	\$35	0.2%	0
Store brands (10)	<hr/>		
	\$1,015	5.4%	3
	<hr/>		
	\$18,725	100.0%	1,930
Combined share		34.2%	
Premerger HHI			1,930
Delta			399
Postmerger HHI			2329

34.2%, $\Delta = 399$, postmerger HHI = 2329
 Relatively weak HHI and judicial precedent case
 (surpasses 30% *PNB* threshold and maybe 4CFR)
 Strengthened by supporting theories of
 anticompetitive harm (below)

4. Write: The prima facie case

- The *PNB* presumption in the all-ice cream market
 - Instructor's answer (form prepared in advance):
 - First, look at *Philadelphia National Bank* (if applicable):

Although the FTC has not recently challenged a transaction in this range, the combined share of 34.2% and an increase in the 2-firm concentration ratio from 53.2% to 59.8% arguably could satisfy the *PNB* presumption under the facts of *Philadelphia National Bank*. Moreover, the change in the HHI of 399 and the resulting postmerger HHI of 2329, although not presumptively unlawful, is be high enough to raise significant competitive concerns under the Merger Guidelines. While most modern complaints filed by the FTC and DOJ have larger HHI statistics, especially in postmerger concentration, there is judicial precedent for finding a Section 7 violation with shares and concentration in the same range as we have here. See, e.g., *United States v. UOM-Kymmene OYJ*, No. 03 C 2528, 2003 WL 21781902 (N.D. Ill. July 25, 2003) (complaint alleging combined market share of 20%, delta of 190, and postmerger HHI of 2990); see also *In re Evanston Northwestern Healthcare Corp.*, No. 9315, 2007 WL 2286195, at *4 (FTC Aug. 6, 2007) (combined market share of 35%, delta of 384, and postmerger HHI of 2739).

4. Write: The prima facie case

- The *PNB* presumption in the all ice cream market
 - Instructor's answer (form prepared in advance):
 - Second, look at the Merger Guidelines thresholds:

Although the FTC has not recently challenged a transaction in this range, the combined share of 34.2% and an increase in the 2-firm concentration ratio from 53.2% to 59.8% arguably could satisfy the *PNB* presumption under the facts of *Philadelphia National Bank*. **Moreover, the change in the HHI of 399 and the resulting postmerger HHI of 2329, although not presumptively unlawful, is be high enough to raise significant competitive concerns under the Merger Guidelines.** While most modern complaints filed by the FTC and DOJ have larger HHI statistics, especially in postmerger concentration, there is judicial precedent for finding a Section 7 violation with shares and concentration in the same range as we have here. See, e.g., *United States v. UOM-Kymmene OYJ*, No. 03 C 2528, 2003 WL 21781902 (N.D. Ill. July 25, 2003) (complaint alleging combined market share of 20%, delta of 190, and postmerger HHI of 2990); see also *In re Evanston Northwestern Healthcare Corp.*, No. 9315, 2007 WL 2286195, at *4 (FTC Aug. 6, 2007) (combined market share of 35%, delta of 384, and postmerger HHI of 2739).

4. Write: The prima facie case

- The *PNB* presumption in the all ice cream market
 - Instructor's answer (form prepared in advance):
 - Third, look at the case law:

Although the FTC has not recently challenged a transaction in this range, the combined share of 34.2% and an increase in the 2-firm concentration ratio from 53.2% to 59.8% arguably could satisfy the *PNB* presumption under the facts of *Philadelphia National Bank*. Moreover, the change in the HHI of 399 and the resulting postmerger HHI of 2329, although not presumptively unlawful, is high enough to raise significant competitive concerns under the Merger Guidelines.

While most modern complaints filed by the FTC and DOJ have larger HHI statistics, especially in postmerger concentration, there is judicial precedent for finding a Section 7 violation with shares and concentration in the same range as we have here. See, e.g., *United States v. UOM-Kymmene OYJ*, No. 03 C 2528, 2003 WL 21781902 (N.D. Ill. July 25, 2003) (complaint alleging combined market share of 20%, delta of 190, and postmerger HHI of 2990); see also *In re Evanston Northwestern Healthcare Corp.*, No. 9315, 2007 WL 2286195, at *4 (FTC Aug. 6, 2007) (combined market share of 35%, delta of 384, and postmerger HHI of 2739).

Note: Not the strongest case authority, but use what you can. If the HHIs were somewhat higher, you could add other cases.

4. Write: The prima facie case

- Additional evidence supporting the prima facie case
 - Coordinated effects—applies
 - State the test (prepared in advance)
 - Premerger, the market is susceptible to tacit coordination
 - The merger will increase the likelihood or effectiveness of tacit coordination
 - *Premium ice cream market*: Apply the test—on price
 - Premium ice cream market susceptible to tacit coordination
 1. Selection problem
 - Will the firms be able to “agree” to the price or other terms on which they will tacitly coordinate?
 2. Incentive compatibility problem
 - Will the (short-run) incentive to pursue a more competitively aggressive strategy, which all profit-maximizing firms have, undermine any tacit coordination?
 3. External interference problem
 - Apart from the firms in the market, will other entities disrupt any tacit coordination?
 - Merger will increase the probability and effectiveness of tacit coordination
 - Reduces significant firms from three to two
 - Creates a duopoly with two equal-sized firms (and a competitive fringe)
 - All-ice cream market
 - Analogous analysis

4. Write: The prima facie case

- Additional evidence supporting the prima facie case
 - Maverick—applies (Clare's is a maverick in pricing and innovation)
 - State the test (prepared in advance)
 - Premerger, the market is susceptible to tacit coordination
 - One of the merging parties is a disruptive force that impedes coordination (the “maverick”)
 - The acquisition of the maverick will remove the disruptive force and increase the probability or effectiveness of tacit coordination
 - Apply the test to Clare's
 - Small firm premerger
 - Disrupted the ability of Al's and Benny's to raise prices premerger
 - Innovative—forced Al's and Benny's to follow
 - Large firm with single brand postmerger (45% share; tied for No. 1 with Al's)—reduces maverick incentives on both price and innovation
 - Bottom line:
 - Will enable more accommodating conduct on higher premium prices
 - Will enable more accommodating conduct on lower rates of premium innovation
 - Note
 - Works in both the premium ice cream market and the all ice cream market

4. Write: The prima facie case

- Additional evidence supporting the prima facie case
 - Unilateral effects on price—does not apply
 - Test (prepared in advance)
 1. The products in question must be differentiated (both premerger and postmerger)
 2. The products of the merging parties must be close substitutes for one another
 - That is, they have high cross-elasticities of demand or diversion ratios with one another
 3. The products of (most) other firms must be much more distant substitutes
 - That is, they have low cross-elasticities of demand or low diversion ratios with the products of the merging firms
 4. Repositioning into the products of the merging firms must be difficult
 - That is, other incumbent firms and new entrants in the market cannot easily change their product's attributes or introduce a new product that would be a close substitute to the products of the merging firm
 - Apply the test
 - Premerger, Clare's and Benny's premium ice cream products were coincidentally sold at the same price but are “differentiated by content and brand” and had sold at different prices in the past
 - Postmerger,
 - Clare's will consolidate the premium brands, so there will only be one brand, so there will be no differentiated premium products on which to increase the price of one product and divert sales to a second product
 - Little diversion from premium products to regular products (and vice versa), so the merged firm has no opportunity for unilateral effects by raising the price in one category and recapturing diverted sales in the other category

4. Write: The prima facie case

- Additional evidence supporting the prima facie case
 - Unilateral effects on innovation
 - Apply the test
 - Premerger, the Clare's was uniquely innovative in premium ice cream
 - Largely in an effort to increase market share
 - Postmerger,
 - Combined firm will have a large market share in premium ice cream
 - 45%--Tied for #1 with AI's
 - Given the large share, Clare's no longer has the same incentives to innovate
 - So the rate of innovation in premium ice cream would decrease even if all other firms continued to maintain their premerger innovation rates
 - Note
 - Works in both the premium ice cream market and the all ice cream market
 - Although this theory is sound, the reduction in innovation works better as a coordinated effect theory

4. Write: The prima facie case

- Additional evidence supporting the prima facie case
 - One more thing—GUPPIs
 - Think carefully whether you need to discuss GUPPIs
 - These are used in models to predict postmerger price increases
 - GUPPIs themselves are only indices—Standing alone, they do not tell you very much
 - There are no thresholds for when a GUPPI is “too high” and suggests an actionable anticompetitive price increase
 - The only models we have examined that simulate prices with GUPPIs are ones with *complete symmetry* between the merging firms
 - If you do not see complete symmetry in the model, chances are that there is little to say about GUPPIs

Remember, you will get no credit for discussing things that are not useful in answering the question presented!!

4. Write: Defendants' rebuttal arguments

- First, make sure you know what defenses need to be addressed:
 1. *Broad markets/ low HHIs*: The only relevant market is all ice cream, and in this market the merger is too small to create a competitive problem
 2. *Entry/expansion*: Even if premium ice cream is the relevant market, the HHIs based on actual sales, which are not that high, should be further downgraded in their probative value of anticompetitive effect given the supply-side substitutability between regular ice cream and premium ice cream
 3. *Expansion defense*: Dino's, which entered four years ago and today has the same share in premium ice cream as Clare's, will continue to grow its business aggressively, and its efforts will ensure that the premium ice cream market remains competitive postmerger
 4. *Continued maverickness*: Clare's, which will control the merged firm, will continue its philosophy of growing market share through competitive pricing and product innovation in premium ice cream and so benefit consumers given its larger sales base
 5. *Efficiencies*: The merger will produce substantial efficiencies that will offset any possible anticompetitive effect of the transaction. None of these arguments should successfully rebut the presumption that the transaction is anticompetitive

This is taken verbatim from the hypothetical. But you cannot always expect that the hypothetical will be so clear in mapping the defense arguments to the legal defenses.

Also, you may find it helpful to name the defenses

4. Write: Defendants' rebuttal arguments

1. *Broad market*: The only relevant market is all ice cream, and in this market the merger is too small to create a competitive problem
 - a. *Key 1*: Analysis shows that premium ice cream is also a market (see above) in which the merger is anticompetitive
 - Sufficient that the merger be found likely to be anticompetitive in only one relevant market to be enjoined
 - b. Could argue that all ice cream violates the “smallest market” principle
 - Still cited by some courts but rejected as a strict requirement in the 2010 Merger Guidelines—not a winning argument
 - c. *Key 2*: The transaction is anticompetitive in an all ice cream market
 - i. Shares alone (weakly) predicate the *PNB* presumption
 - ii. Merger eliminates Clare's as a maverick and creates an anticompetitive unilateral effect in pricing and innovation
 - d. Note on recapture unilateral effects in an all ice cream market
 - i. There is no anticompetitive recapture unilateral effect in pricing because—
 - a. the premerger margins of Clare's and Benny's products are the same, *and*
 - b. Clare's is consolidating the merged firm's premium ice cream products into one brand → no opportunity for diversion through recapture postmerger
 - ii. Of course, you could argue that although Clare's says that it will consolidate the brands postmerger, it is under no obligation to do so and if it maintains two brands postmerger there would likely be an anticompetitive unilateral effect in pricing

4. Write: Defendants' rebuttal arguments

2. *Rapid entrants*: Even if premium ice cream is the relevant market, the HHIs are not that high and should be further downgraded given the supply-side substitutability between regular and premium ice cream
 - a. *Reject HHI premise*: HHIs high enough in actual sales to predicate the *PNB* presumption under judicial precedent and the Merger Guidelines
 - b. *State test* for rapid entrants “defense”
 - i. There exist firms that are likely to rapidly into production or sale of a product in the relevant market, without incurring significant sunk costs of entry and exit, *and*
 - ii. This entry or expansion (collectively) would be sufficient to prevent any anticompetitive effect from the merger from occurring

NB: Rapid entrants are treated under the Merger Guidelines as market participants and assigned market shares. Here, I have refashioned it as an entry/expansion defense. You can be a bit flexible in the technical treatment of rapid entrants (as long as it makes economic sense)

4. Write: Defendants' rebuttal arguments

2. *Rapid entrants (con't)*:

- c. *Apply test*: Reputational barriers are too high for meaningful rapid expansion—
 - i. Despite Clare's and Dino's aggressive efforts to grow in premium ice cream, neither was able to obtain more than a 5% market within three years of entry
 - ii. Clare's is purchasing Benny's because it did not believe it could grow its market share significantly in the coming years on its own
 - iii. Significant price differential (\$4.00 v. \$3.00) and especially the margin differential (30% v. 20%) between premium ice cream and regular ice cream did not induce regular ice cream producers other than Clare's to materially shift or expand production into premium ice cream
- d. *Bottom line*:
 - i. High reputational barriers prevent timely and sufficient entry to constrain pricing
 - ii. No argument that entry (rapid or otherwise) would protect the market from an anticompetitive decrease in the innovation of new premium ice cream products

4. Write: Defendants' rebuttal arguments

2. *Rapid entrants (con't)*:

- Alternative analysis using the Guidelines market participants approach
 - *State test*:
 - Rapid entry would have to occur at a sufficient level to negate the application of the *PNB* presumption (and rebut any explicit theories of anticompetitive effect)
 - *Apply test*:
 - During the investigation, the merging parties did not advance any evidence of the timing and magnitude of rapid entry, much less evidence sufficient to show that the magnitude would be sufficient to make the *PNB* presumption inapplicable
 - Moreover, it is unlikely that such evidence exists
 - Rerun arguments that reputational barriers are too high for meaningful rapid expansion
 - *Bottom line*:
 - i. High reputational barriers prevent meaningful rapid entry or expansion sufficient to defeat the application of the *PNB* presumption
 - ii. No argument that rapid entry would defeat explicit theories of anticompetitive pricing effects
 - iii. No argument that entry (rapid or otherwise) would protect the market from an anticompetitive decrease in the innovation of new premium ice cream products

Either approach would be sufficient on an exam question

4. Write: Defendants' rebuttal arguments

3. *Expansion*: Dino's, which entered four years ago and today has the same share in premium ice cream as Clare's, will continue to grow its business aggressively, and its efforts will ensure that the premium ice cream market remains competitive postmerger
 - a. State test (expansion defense—prepared in advance)
 - i. Timely
 - ii. Likely
 - iii. Sufficient
 - b. Apply the test—not timely or sufficient
 - i. Dino's only reached a 5% market share after four years
 - ii. Even if Dino's grows at its historical rate—about 50% per year—in another two years, Dino's would only have a market share of a little over 11%
 - iii. Should only look at *incremental* growth resulting from the merger—parties presented no evidence of future growth
 - iv. Even if Dino's is successful in eventually creating enough downward pricing pressure to offset the merger's anticompetitive effect, until this time the merger would be anticompetitive and violate Section 7
 - v. Even enough downward pricing pressure would not offset the anticompetitive effect of reduced innovation

4. Write: Defendants' rebuttal arguments

4. *Continued maverickness*: Clare's, which will control the merged firm, will continue its philosophy of growing market share through competitive pricing and product innovation in premium ice cream and so benefit consumers
 - a. Clare's premerger incentives to price and innovate aggressively were designed to increase its market share and become a larger, more profitable firm. After the merger, Clare's will have achieved its goal of becoming a larger firm.
 - b. Moreover, Al's and the combined firm will account for 90% of all premium ice cream sales → strong incentive to follow the leader (coordinated effects)
 - Under these conditions, it will be in the combined firm's profit-maximizing interest to follow Al's lead in increasing prices—or even to lead price increases itself—since the opportunity costs of *not* doing so will be so high
 - c. Given this profit incentive, Clare's claim that it will continue to price and innovate aggressively after the merger, just as it did before the merger, should not be credited

4. Write: Defendants' rebuttal arguments

5. *Efficiencies*: The merger will produce substantial efficiencies that will offset any possible anticompetitive effect of the transaction
 - a. Test (prepared in advance)
 - i. Merger specific
 - ii. Verifiable
 - iii. Sufficient to overcome otherwise anticompetitive effects of the merger
 - iv. Not resulting from an anticompetitive effect of the merger
 - b. All claimed efficiencies are fixed cost efficiencies and are not cognizable in an efficiency defense
 - i. Eliminating duplicative administrative and sales overhead
 - ii. Streamlining the combined sales force
 - iii. Taking advantage of some excess capacity to consolidate production
 - iv. Reducing the number of the merged firm's operating plants
 - c. No claim of other, cognizable efficiencies

Fixed cost savings are likely to be present in most hypotheticals. Be sure that your boilerplate explains that fixed cost savings are not cognizable in an efficiencies defense because they do not offset the merged firm's anticompetitive pricing incentives and are not passed on to consumers.

4. Write: Conclusion on likelihood of success

■ Instructor's answer

3. Conclusion on likelihood of success on the Section 7 merits

Under the standards used in the Horizontal Merger Guidelines and by the courts, the FTC should be able to establish its prima facie case that the merger violates Section 7 by likely increasing prices and reducing product innovation in both a nationwide premium ice cream and a nationwide all ice cream and defeat the expansion, pricing and innovation efficiencies, cost efficiencies, and price reduction defenses of the merging parties. This proves a likelihood of success on the merits of proving a Section 7 violation in both markets.

- No need to be elaborate here—details in the conclusion in the introduction
 - State the dimensions of the relevant product and geographic market
 - State the nature of the anticompetitive effect
 - State what defenses were rejected
 - Conclude on the likelihood of success on the merits

You can use some boilerplate here—but be sure to customize it to the problem!

4. Write: Weighing the equities

- Role of equities in applying Section 13(b) (prepared in advance)
- The equities
 - The public equities (prepared in advance)
 - The private equities (largely prepared in advance)
 - Deal will crater
 - Loss of premium to Benny's shareholders
- Weighing the equities (prepared in advance)

5. Write: Conclusion

- Instructor's answer

5. Conclusion

For the reasons stated above, the Commission should prevail in its petition for a preliminary injunction under Section 13(b) of the FTC Act blocking Clare's acquisition of Benny's pending the conclusion of the administrative adjudication of the merits of the Commission's Section 7 claim against the transaction.

- Again, no need to be elaborate if the conclusion paragraph in the introduction answers the specific questions asked

Final thoughts

■ Graded homework problem

- Posted November 9 (in the evening); due on November 21 (8:00 pm)
- Counts as one of the three exam questions
- No homework required for classes during the graded homework period → Spend your time on the homework problem
- No time limit

■ Review session

- Wednesday, November 9, 3:30 pm – 5:30 pm (McD 109)

■ Don't hesitate to reach out to me with questions on concepts and general principles through the end of the semester

- But I will not be able to answer questions specific to the graded homework assignment once it is posted

Use the graded homework assignment to nail down the rubric, the boilerplate, your exam strategy, any Excel spreadsheet templates, and your “copying and pasting” technique. These will pay large dividends during the timed exam.

13. Staples/Office Depot

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

The Staples logo consists of the word "STAPLES" in a bold, white, sans-serif font, centered within a solid red rectangular background. Below the word "STAPLES" is the tagline "The Office Superstore" in a smaller, white, sans-serif font.

STAPLES

The Office Superstore

Office DEPOT®

OfficeMax®

Taking care of business

The Background

The deal

- Staples to acquire Office Depot for \$6.3 billion (cash and stock)
 - Announced February 4, 2015
 - Take 2: Parties attempted to merge in 1997. The FTC challenged the deal and obtained a Section 13(b) preliminary injunction and the parties subsequently abandoned the deal.
 - Total transaction value: \$6.3 billion
 - Office Depot valued at \$11.00 per share
 - \$7.25 in cash
 - \$3.75 in Staples stock (0.2188 shares)
 - 44% premium over February 2 Office Depot closing price
 - 65% premium over 90-day Office Depot average closing price
 - Office Depot shareholders will hold approximately 16% of the combined company
 - Combined company pro forma sales: \$39 billion

The parties

■ Staples

- ❑ Largest supplier of office supplies
- ❑ Opened first office products superstore in 1986
- ❑ Operates in three business segments:
 - North American retail stores and online sales (48.0% of revenues)
 - ❑ 1,515 stores in the United States and 331 stores in Canada North American commercial sales (B2B contract sales) (34.8%)
 - North American Commercial (34.2%)
 - ❑ Focusing on B2B sales
 - International operations (17.2%)
 - ❑ Consists of businesses in 23 countries in Europe, Australia, South America and Asia
- ❑ 2014 revenues: \$22.5 billion



The parties

■ Office Depot

- Second largest supplier of office supplies
- Opened first store in 1986
- Acquired OfficeMax (third largest office supply superstore) on November 5, 2013
 - Announced February 2013
 - FTC closed investigation without enforcement action on November 1, 2013
- Operates in three business segments:
 - North America retail (41% of revenues)
 - 1,912 office supply stores, including 823 OfficeMax stores
 - North American business solutions (B2B contract sales) (31.8%)
 - International (27.1%)
- 2014 revenues: \$16.1 billion



The deal

■ Purchase agreement

- Drop dead date: November 4, 2015 (9 months)
 - Automatic extension if antitrust conditions not satisfied to February 4, 2016 (one year after signing)
- Divestiture obligation:
 - Office Depot stores with 2014 revenues up to \$1.25 billion in the United States
 - 7.8% of Office Depot sales
- Antitrust reverse termination fee: \$250 million (4% of transaction value)



Deal rationale

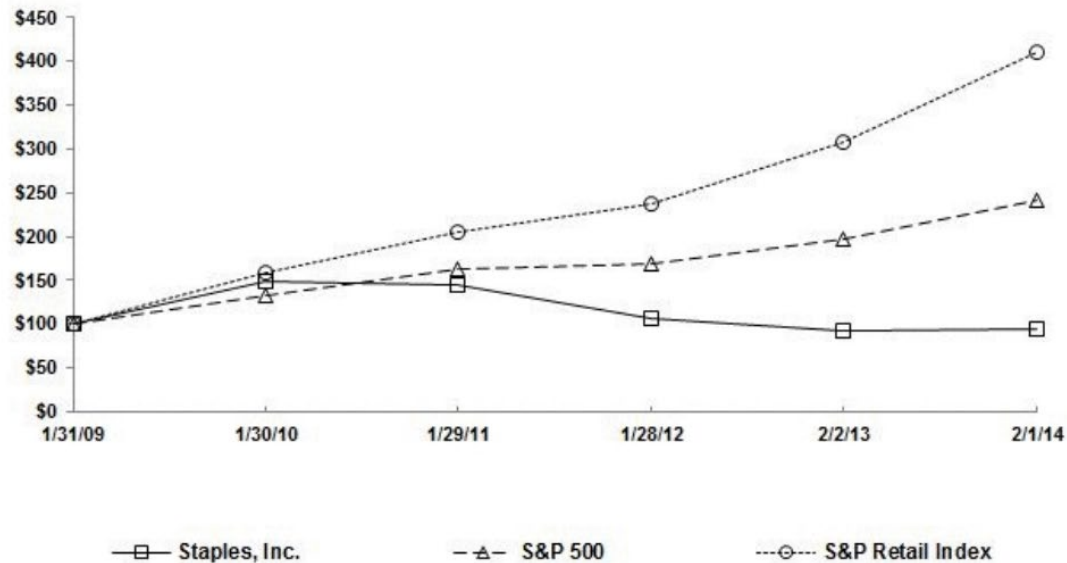
- Office superstores being severely challenged by new competitors
 - New competitors since the original 1997 enjoined transaction
 - Mass merchants such as Walmart, Target and Tesco
 - Warehouse clubs such as Costco
 - Computer and electronics retail stores such as Best Buy
 - Specialty technology stores such as Apple
 - Copy and print businesses such as FedEx Office
 - Online retailers such as Amazon.com and other discount retailers
 - Concomitant sales declines

	Sales Year-over-Year		
	2011	2012	2013
Staples	-3.0%	-1.2%	-5.2%
Office Depot	-2%	-8%	-5%

- Staples' response
 - Recently announced that it would be closing up to 225 stores
 - Reduced the size of its store prototype from 24,000 square feet to 12,000 square feet

Deal rationale

- Staples stock performance —Return on \$100 investment on 1/31/2009



TOTAL RETURN TO STOCKHOLDERS

	31-Jan-09	30-Jan-10	29-Jan-11	28-Jan-12	2-Feb-13	1-Feb-14
Staples, Inc.	\$ 100.00	\$ 149.49	\$ 144.63	\$ 106.48	\$ 92.95	\$ 93.51
S&P 500 Index	\$ 100.00	\$ 133.14	\$ 162.67	\$ 169.54	\$ 197.98	\$ 240.58
S&P Retail Index	\$ 100.00	\$ 158.09	\$ 205.24	\$ 238.26	\$ 307.32	\$ 410.04

Deal rationale




Compelling Strategic and Financial Rationale

- Combined company better positioned to provide more value to customers and compete against a large and diverse set of competitors
- Strategic combination expected to deliver at least \$1 billion of synergies by third full fiscal year post-closing
- Operational efficiencies and cost savings used to dramatically accelerate Staples' strategic reinvention
- Provides ability to optimize retail footprint, minimize redundancy, and reduce costs
- Accretive to EPS in first year post-closing after excluding one-time integration and restructuring costs and purchase accounting adjustments



Deal rationale

Creating a \$39 Billion Distributor of Products and Services

			
LTM Revenue \$B ⁽¹⁾	<ul style="list-style-type: none"> North America \$18.8 International \$3.9 Total \$22.7 	<ul style="list-style-type: none"> North America \$12.7 International \$3.5 Total \$16.2 	<ul style="list-style-type: none"> North America \$31.5 International \$7.4 Total \$38.9
Distribution Facilities ⁽²⁾	<ul style="list-style-type: none"> North America 69 International 47 Total 116 	<ul style="list-style-type: none"> North America 91 International 36 Total 127 	<ul style="list-style-type: none"> North America 160 International 83 Total 243
Store Count ⁽³⁾	<ul style="list-style-type: none"> North America 1,721 International 303 Total 2,024 	<ul style="list-style-type: none"> North America 1,851 International 145 Total 1,996 	<ul style="list-style-type: none"> North America 3,572 International 448 Total 4,020

1. LTM Revenue as of 11/1/2014 and 9/27/2014 for Staples and Office Depot, respectively. Office Depot revenue pro forma for merger with OfficeMax and excludes revenue generated by the former OfficeMax business in Mexico.

2. As of fiscal year ended 2/1/2014 and 12/28/2013 for Staples and Office Depot, respectively. Office Depot data includes cross docks.

3. As of 11/1/2014 and 9/27/2014 for Staples and Office Depot, respectively.

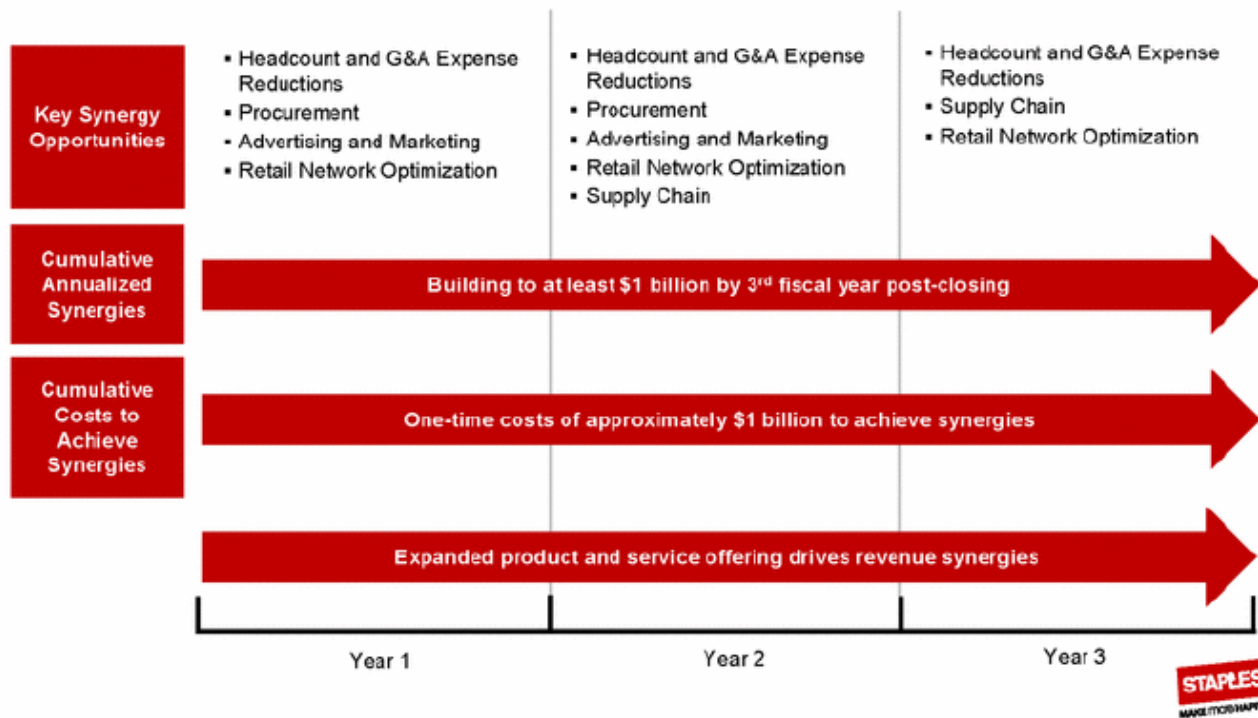


10

Deal rationale

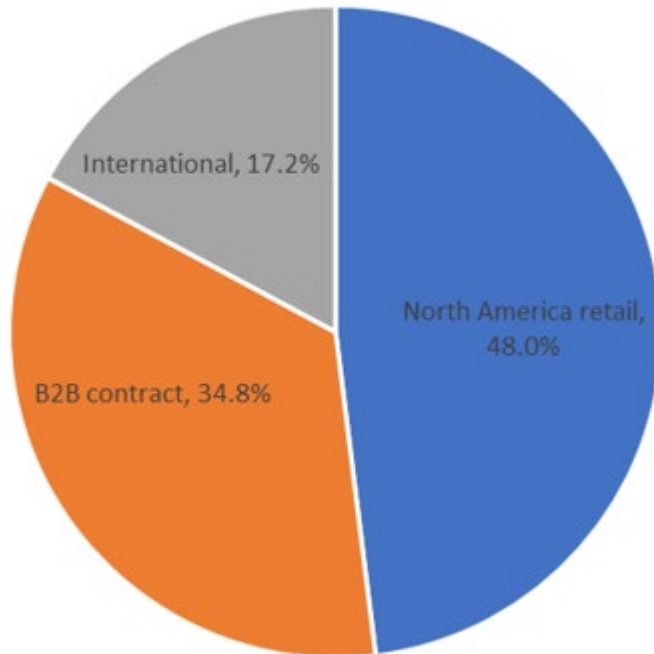
Annualized Synergies Building to at Least \$1 Billion Over Three Year Integration Period

The acquisition presents a unique and exciting opportunity to reduce costs and improve service in a way that neither company could achieve on its own

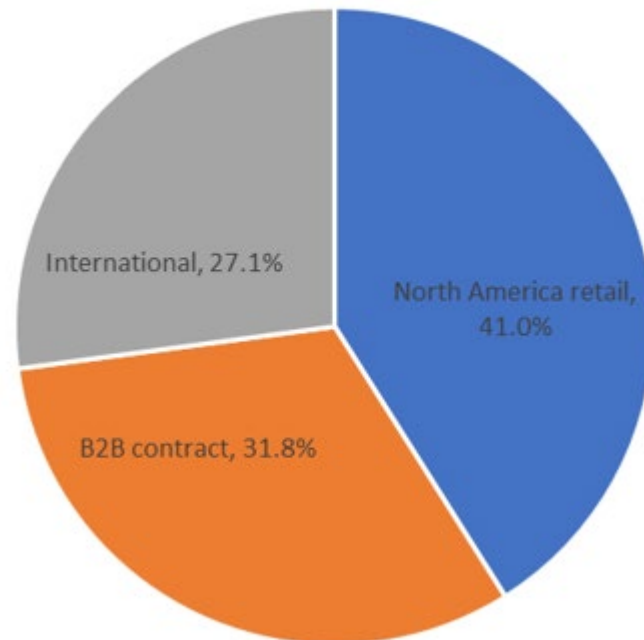


Overlaps

Staples



Office Depot



The FTC investigation and litigation

- FTC investigated for almost one year

Date	Event
February 4, 2015	Deal signed
March 30, 2015	Second request issued
August 28, 2015	Staples and Office Depot certify substantial compliance
October 12, 2015	Staples and Office enter into a timing agreement with FTC not to close and the FTC agrees to decide outcome of investigation by December 8, 2015
November 4, 2015	Automatic extension of drop dead date to February 4, 2016
December 7, 2015	FTC challenges transaction by unanimous vote (4-0)

The complaint

- Two counts
 1. Acquisition, if consummated, would violate Clayton Act § 7
 2. Signing of the merger agreement violated FTC Act § 5
- Relevant market
 - Sale and distribution of consumable office supplies to large B2B customers in the United States
 - BUT excluding ink and toner for printers and copiers
 - *Query: Why no challenge in retail markets?*
- Prayer
 - Preliminary injunction pending resolution of the merits in an administrative proceeding

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FEDERAL TRADE COMMISSION
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

DISTRICT OF COLUMBIA
441 4th Street, N.W., Suite 600 South
Washington, DC 20001

COMMONWEALTH OF PENNSYLVANIA
14th Floor Strawberry Square
Harrisburg, PA 17120

Plaintiffs,

v.

STAPLES, INC.
500 Staples Drive
Framingham, MA 01702

and

OFFICE DEPOT, INC.
6600 North Military Trail
Boca Raton, FL 33496

Defendants.

Civil Action No. 15-cv-02115

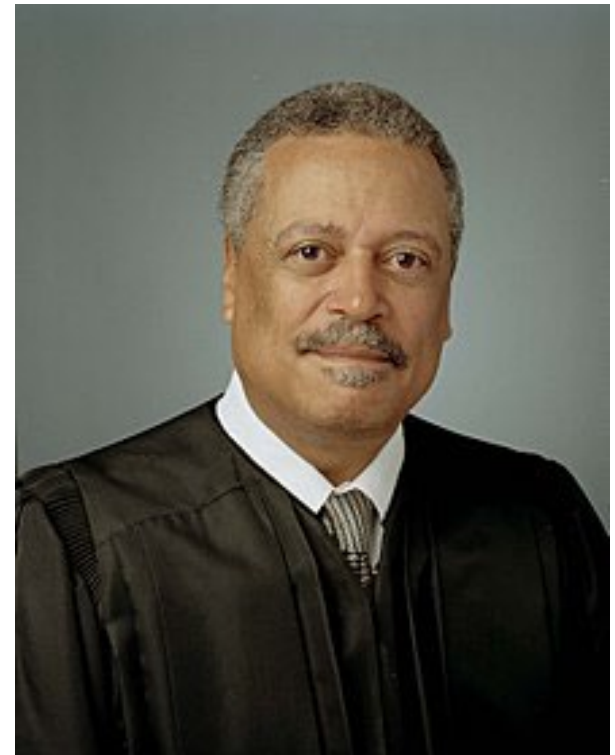
PUBLIC VERSION

COMPLAINT FOR TEMPORARY RESTRAINING ORDER
AND PRELIMINARY INJUNCTION PURSUANT TO
SECTION 13(b) OF THE FEDERAL TRADE COMMISSION ACT

Plaintiffs, the Federal Trade Commission (“FTC” or “Commission”), by its designated attorneys, and the District of Columbia and the Commonwealth of Pennsylvania, acting by and through their respective Office of Attorney General (collectively, “Plaintiff States”), petition this Court for a temporary restraining order and preliminary injunction enjoining Staples, Inc. (“Staples”) from consummating its proposed merger (the “Merger”) with Office Depot, Inc.

The District Court

- Tried in the District Court of the District of Columbia
 - Judge Emmet G. Sullivan
 - Appointed by President Clinton
 - Assumed office: June 16, 1994
 - First merger antitrust case



The Section 13(b) proceedings

■ Timing developments

Date	Event
December 7, 2015	Section 13(b) complaint filed
December 21, 2015	Staples proposes divesting \$1.25 billion in commercial contracts — FTC rejected with no counteroffer
February 2, 2016	Parties extend drop-dead date to May 16, 2016
February 10, 2016	EU approval (with conditions) — Divestiture of Office Depot's European contract business — Divestiture of all of Office Depot's operations in Sweden
February 16, 2016	Staples agrees to sell \$550 million in large corporate contracts business to Essendant for \$22.5 million — Conditioned on closing of Staples/Office Depot merger
March 21, 2016	Evidentiary hearing commences — 4 months after filing of the complaint

The Section 13(b) proceedings

■ Discovery

- ❑ 15 million pages of documents produced
- ❑ >70 depositions taken
- ❑ Five expert reports

■ The trial

- ❑ March 21, 2016, to April 5, 2016
- ❑ 10 live witnesses
- ❑ 4000 exhibits admitted
- ❑ At the conclusion of the plaintiffs' case, the *defendants rested their case* without presenting any fact or expert witnesses
- ❑ NB: Defendants represented to Court that they would *terminate their transaction* if the Court entered a preliminary injunction

PI entered: May 10, 2016
Deal terminated: May 10, 2016

The expert witnesses

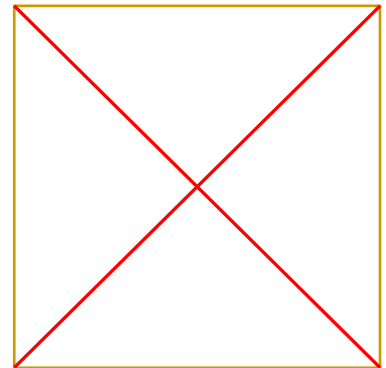
■ FTC expert: Carl Shapiro

- Professor of Professor of Business Strategy, UC Berkeley
- Former chief economist, Antitrust Division (twice)
- One of two principal drafters of the 2010 Merger Guidelines
- Former Member, Council of Economic Advisers
- Very experienced trial expert witness
- A favorite of the DOJ and FTC



■ Merging parties: None

- Rested their case without calling witnesses



Organization of opinion

■ Relevant markets

- The relevant geographic market
 - Stipulated to be the United States
- The relevant product market
 - Consumable office supplies sold to B2B customers BUT excluding ink and toner
 - Legal principles considered when defining a relevant market
 - Application of legal principles to plaintiffs' market definition
 - Defendants' arguments in opposition to plaintiffs' alleged market
 - Conclusions regarding the relevant market

■ Application of *PNB* presumption

- Analysis of the plaintiffs' arguments relating to the probable effects on competition based on market share calculations
- Defendants' arguments in opposition to plaintiffs' market share calculations
- Conclusions regarding plaintiffs' market share

■ Additional evidence of competitive harm

- Plaintiffs' evidence of additional harm

■ Defendants' further response to plaintiffs' prima facie case

- Downward pricing pressure defenses

■ Weighing the equities

The District Court Opinion

1. The Prima Facie Case

A. Relevant Geographic Market

Relevant geographic market

- Stipulated: The United States

The District Court Opinion

1. The Prima Facie Case

B. Relevant Product Market

The positions

■ FTC:

- Consumable office supplies sold to B2B customers BUT excluding ink and toner
 - B2B customers (definition): spend \$500K or more annually on office supplies (appx. 1200 companies)
 - Note 1: This is a *cluster market* with an exclusion
 - Note 2: It is also a *targeted customer market*

■ Merging parties:

- All consumable office supplies
- No evidence support a B2B market

The Court: Accepts FTC's definition

- Notes that *cluster markets* and *targeted customer markets* are recognized by the courts and Merger Guidelines
- Three *Brown Shoe* factors support:
 1. Public recognition as a separate market (based on parties' business documents)
 2. Exhibits distinct prices and high sensitivity to price changes
 - Bid for vendors using RFPs for 3-5 yr. contracts (with upfront lump-sum rebates)
 - NB: Contracts not exclusive
 - Customer's "play" Staples and Office Depot off against each other
 - Pay about ½ compared to average retail customer
 - Bids are %-off list prices for core products
 - Customers will switch vendors for small percentage differences
 3. Consists of distinct customers with distinct requirements
 - Require bids by RFP
 - Require sophisticated IT capabilities
 - Personalized, high-quality customer service
 - Nationwide delivery to dispersed geographic locations
 - Expedited delivery services (next day and "desktop" delivery – direct to user within organization)
 - Internal business units organized to focus on B2B business

The Court: Accepts FTC's definition

- Hypothetical monopolist test satisfied
 - Parties agree on test and its applicability
 - *Evidence*: Shapiro expert testimony on hypothetical monopolist test
 - Court provides few details
 - An exhibit used in Shapiro's testimony shows he used a recapture analysis:

Hypothetical Monopolist Test ("HMT") Depends on a Threshold Recapture Rate

- Using 5% price increase, HMT is satisfied if:

$$\text{Recapture Rate} > \frac{10\%}{\text{Profit Margin} + 10\%}$$

Query: What kind of test is this? Is it the right test?

Query: If the SSNIP was 5%, why did Shapiro use 10% in calculating the critical recapture rate?

- Profit Margin estimates range = ■% to ■%
- Leads to Threshold Recapture Rate = ■% to ■%

The Court: Accepts FTC's definition

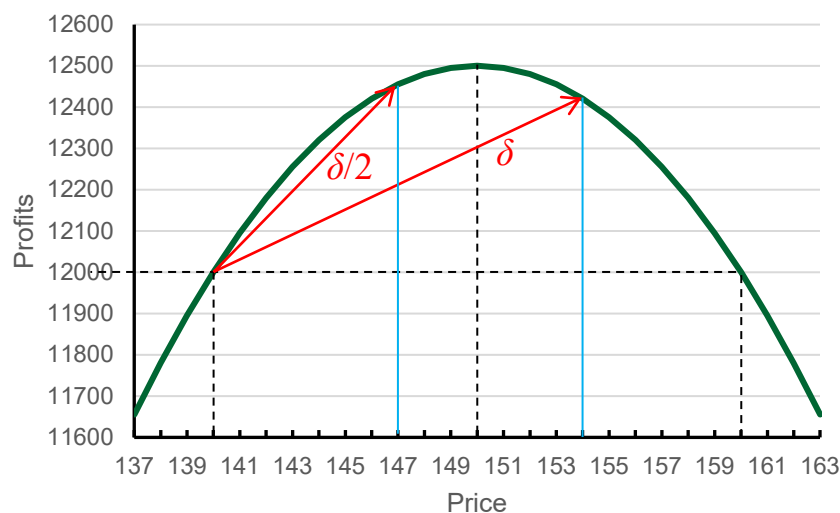
■ Hypothetical monopolist test satisfied

□ Shapiro testimony: Used the *profit-maximization* version of the HMT

■ Illustration—Not Shapiro's analysis

- As shown by the diagram below, the equal profit-prices are at the prevailing price of 140 and at 160
- For linear demand, the profit-maximizing price is one-half the distance between the equal profit prices—here, 150
- So, for a SSNIP of 5% under a profit-maximizing HMT, use 10% in the critical loss or critical recapture formulas: Profitability under $2 \times \text{SSNIP}$ → Satisfies profit-maximization HMT

Profits as a Function of Price



Propositions:

1. If a SSNIP δ is profitable, then the profit-maximizing percentage price increase is at least $\delta/2$
2. If a SSNIP δ is not profitable, then the profit-maximizing percentage price increase is less than $\delta/2$

NB: This technique works only with linear demand curves

Aside: Merger simulation

■ Example: $\delta/2$ simulation

Widgets are homogeneous products and there are multiple firms producing them. The prevailing market price is 140, the aggregate production quantity is 300, and the marginal cost is a constant 100 for all producers. If the price of all widgets were to increase by 5%, aggregate quantity would decrease by 11.67%. What is the profit-maximizing price increase δ_{Max} for the hypothetical monopolist?

□ Answer:

- Set critical elasticity equal to actual elasticity to create a breakeven condition with an unknown price increase x :

$$\varepsilon_{Actual} = \frac{\% \Delta q_1}{\% \Delta p_1} = \frac{11.67\%}{5\%} = \frac{1}{x + m} = \frac{1}{x + \frac{40}{140}} = \varepsilon_{Critical}$$

- Solve for the breakeven percentage price increase x using Mathpapa: $x = 0.1428$
- The hypothetical monopolist profit-maximizing price increase is:

$$\delta_{Max} = \frac{x}{2} = \frac{0.1428}{2} = 0.0714 = 7.14\%$$

Taking into account rounding error, this is the profit-maximizing percentage price increase for the hypothetical monopolist (which yields a dollar price increase of \$10)

The Court:

- Accepts FTC's definition
 - Proposed market encompasses all methods of procuring office supplies by large companies
 - Types of suppliers included in proposed market:
 - Primary vendors
 - Off-contract purchases
 - Online
 - Retail
 - Evidence
 - Customers
 - Documents (?)
 - Competitors
 - Note
 - Court relies on both the Shapiro and customer testimony for the proposition that companies can get lower prices because of the competition between Staples and Office Depot → a hypothetical monopolist could raise prices
 - WDC: This amounts to using an anticompetitive effect to prove market definition

The Court: Rejects defendants' attack

■ *Argument 1: Gerrymandered cluster market*

□ Parties' position:

1. No principled reason to exclude BOSS—Just made for litigation
 - Plaintiffs admit that excluded products are included in primary vendor contracts “the overwhelming majority of the time”
2. Definition inconsistent with the one used by the FTC in assessing the 1997 proposed merger

3. FTC made the decision on exclusions prior to Shapiro's independent determination

NB: But defendants did not invoke *Brown Shoe* factors or hypothetical monopolist test to justify inclusion

□ Court: Rejects argument

- Defendants' arguments fail to address the key question: “[A]re the items subject to the same competitive conditions?”

The Court: Rejects defendants' attack

■ *Argument 1: Gerrymandered cluster market*

□ Court: Rejects argument (con't)

1. Ink, toner, and BOSS subject to different competitive dynamics given competition from Managed Print Services vendors (e.g., Xerox, H-P, Lexmark, Ricoh)—
 - Recall, contracts not exclusive, so customers can purchase from other vendors
 - The number of companies providing ink and toner (“Managed Print Services” or “MPS”) to large customers is greater than the number providing other consumable office supplies
 - Customers view MPS vendors as viable contracting suppliers of ink and toner, but view only Staples and Office Depot as viable contracting suppliers for other consumable office supplies
 - Customers frequently disaggregate purchases of ink and toner from purchases of other consumable office supplies
 - Parties' market shares in ink and toner were lower than they are in the alleged relevant market, showing the lack of “analytical similarity” with the FTC's alleged relevant product market
 - *WDC*: Missed the most important thing: Products can be and are separately priced to respond to product-by-product competitive conditions that are different from other products in the cluster market
2. Competitive conditions have “dramatically” changed since 1997
 - MPS vendors did not exist at the time
 - Case focused on retail consumers and not contract channels for large B2B customers
3. Irrelevant that the FTC decided on exclusions prior to Shapiro making an independent determination
 - “Voluminous” empirical evidence supports the exclusions

The Court: Rejects defendants' attack

- *Argument 1: Gerrymandered cluster market*
 - A point not made in the opinion (but should have been): Staples breaks out ink, toner and BOSS in its SEC reporting, indicating that it views them as separate business lines:

	Fiscal Year Ended		
	February 1, 2014	February 2, 2013	January 28, 2012
Core office supplies	27.5%	28.1%	29.4%
Ink and toner	20.2%	19.7%	19.5%
Business technology	15.2%	16.6%	18.0%
Paper	9.0%	9.0%	9.0%
Facilities and breakroom	8.7%	7.4%	6.5%
Computers and mobility	6.9%	6.9%	6.8%
Services	6.9%	6.7%	5.7%
Office furniture	5.6%	5.6%	5.1%
	100.0%	100.0%	100.0%

- The FTC's relevant product market appears to encompass:
 - Core office supplies (27.5%)
 - Paper (9.0%)

} 36.5% of Staple's overall business

So a cluster market does not have to contain the bulk of a firm's business

The Court: Rejects defendants' attack

- *Argument 2: Improper to limit the market to large B2B customers*
 - Parties' position
 - Plaintiffs' attempt to protect "mega companies" is misplaced, because the merger "indisputably will benefit all retail customers, and more than 99 percent of business customers"
 - Court: Rejects argument
 - Antitrust laws exist to protect customers, including relatively small targeted groups
 - Recognized by Merger Guidelines
 - Part of the judicial "submarket" concept
 - Here—
 - "Large" customers can be identified by suppliers
 - Can be differentially priced
 - No meaningful opportunities for arbitrage (i.e., markets are separable)
 - "Significantly, Defendants themselves used the proposed merger to pressure B-to-B customers to lock in prices based on the expectation that they would lose negotiating leverage if the merger were approved."
 - *QUERY*: Why did the Court think this was significant?
 - *QUERY*: What was really going on here?

The District Court Opinion

1. The Prima Facie Case

C. The *PNB* Presumption

PNB presumption triggered

■ Data

- Carl Shapiro used data obtained from a survey of Fortune 100 companies—81 responded with sufficient data:
 - Their overall spend on consumable office supplies
 - The amount spent on consumable office supplies from Staples
 - The amount spent on consumable office supplies from Office Depot

■ Plaintiffs' market shares and HHIs

- From opinion:

	Share	HHI
Staples	47.3%	2237
Office Depot	31.6%	999
Others (6)	21.1%	74
TOTAL	100.0%	3310
Combined	78.9%	3310
Delta		2989
Post		6299

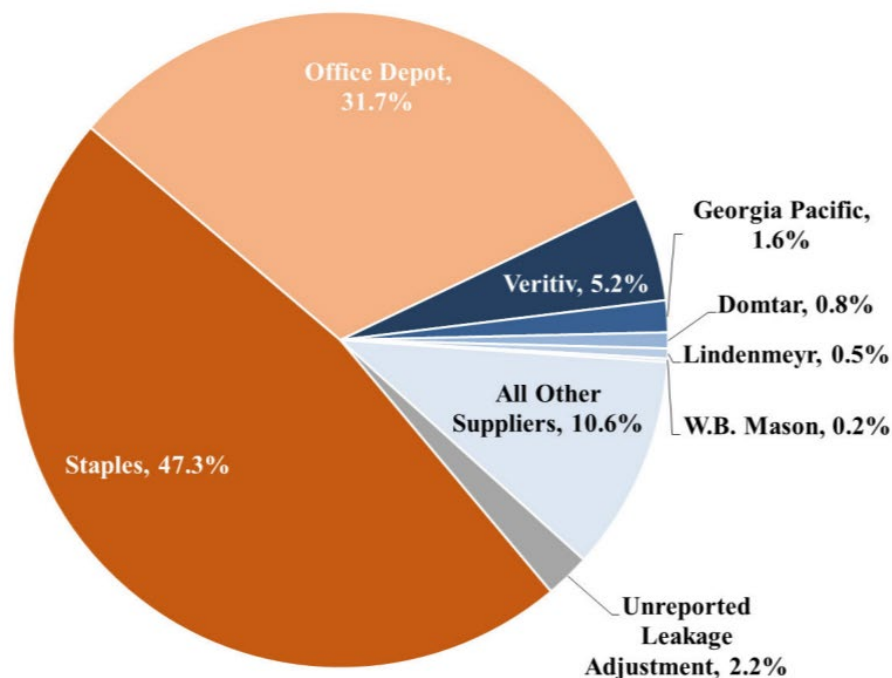
WDC: I arbitrarily chose the number of equally sized “other” suppliers—this is not in the opinion. Note that the HHIs are not especially sensitive to the number of “other” firms

- *Court*: “Put another way, Staples and Office Depot currently operate in the relevant market as a ‘duopoly with a competitive fringe’”

PNB presumption triggered

- Plaintiffs' market shares and HHIs
 - From Shapiro exhibit

Consumable Office Supplies Market Shares
Fortune 100 Customers, 2014



Source: Exhibit R1B, Shapiro Reply Report.

PNB presumption triggered

- Plaintiffs' market shares and HHIs
 - From Shapiro exhibit

Consumable Office Supplies Market Shares: Core v. Paper *Fortune 100 Customers, 2014*

Supplier	Consumable Office Supplies	Core	Paper
Staples	47.3%	48.4%	46.2%
Office Depot	31.7%	38.3%	25.2%
Other Suppliers	21.0%	13.3%	28.6%
Staples + Office Depot	79.0%	86.7%	71.4%

Sources: Exhibits R1B, R3A, and R3B, Shapiro Reply Report.

PNB presumption triggered

- Court:
 - Triggers *PNB* presumption and establishes a prima facie case of anticompetitive effect
 - NB: Court used only Merger Guidelines thresholds to reach this result

PNB presumption triggered

■ Defendants' attack

1. Challenged whether sample was representative of buyers in the relevant product market
 - 1200 companies in relevant market
 - Only 81 companies responded with sufficient data
2. Did not adequately account for “leakage”(unreported discretionary “purchases” by employees)
 - Shapiro survey asked for leakage data
 - 26 reported
 - 12 indicated that leakage was de minimis
 - Fact witnesses testified that leakage was insignificant
 - Shapiro assumed 1%

■ Court: Rejects attacks as speculative

- *WDC*: Big problem for defendants
 - Failed to offer alternative data or analysis that would reach a materially different result

The District Court Opinion

1. The Prima Facie Case

D. Additional Evidence of Anticompetitive Effect

Additional evidence: Unilateral effects

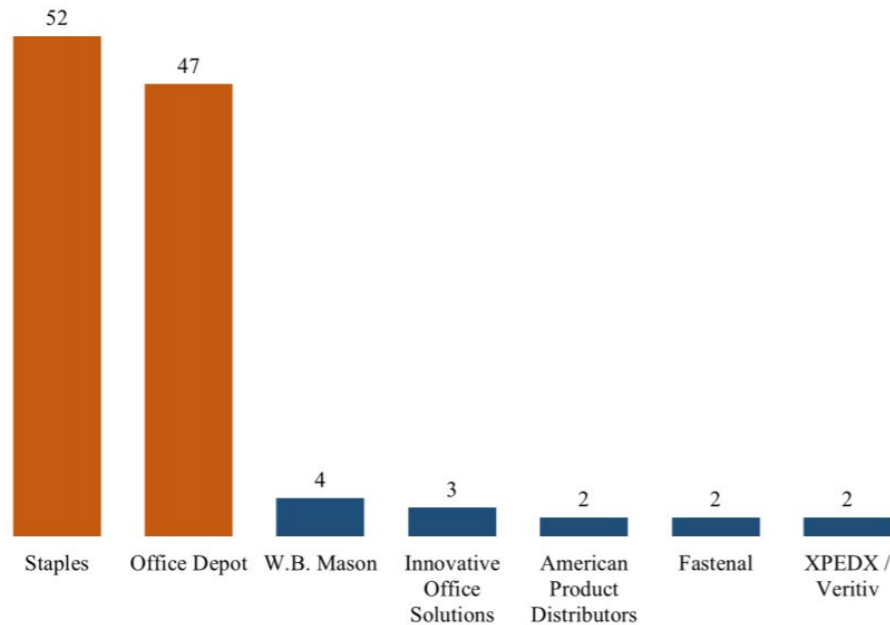
1. Bidding data showed that Staples and Office Depot engaged in significant head-to-head competition
 - ❑ 81% of Staples' bid losses were to Office Depot
 - ❑ 79% of Office Depot's bid losses were to Staples
 - ❑ Often "played off" against each other by customers

Additional evidence: Unilateral effects

1. Bidding data showed that Staples and Office Depot engaged in significant head-to-head competition
 - From Shapiro exhibit:

Staples and Office Depot Dominate in Fortune 100 RFP Data Appearances

N = 52



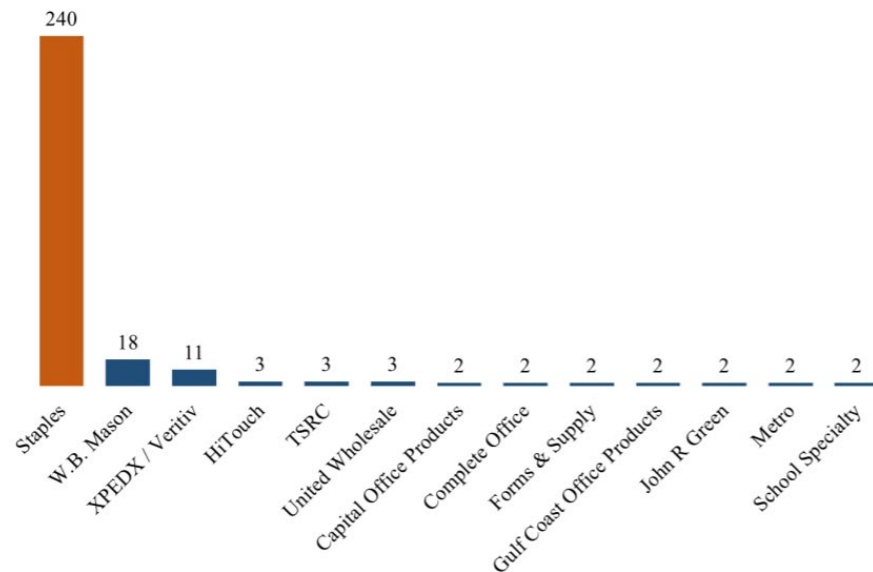
Note: Based on most recent event at each Fortune 100 customer, 2012-2015. In total, 45 suppliers are mentioned.

Source: Exhibit R7A, Shapiro Reply Report.

Additional evidence: Unilateral effects

1. Bidding data showed that Staples and Office Depot engaged in significant head-to-head competition
 - From Shapiro exhibit:

**Staples Dominates in Office Depot's Win-Loss Data
with 240 Wins**
2013-2015 (N = 1253)

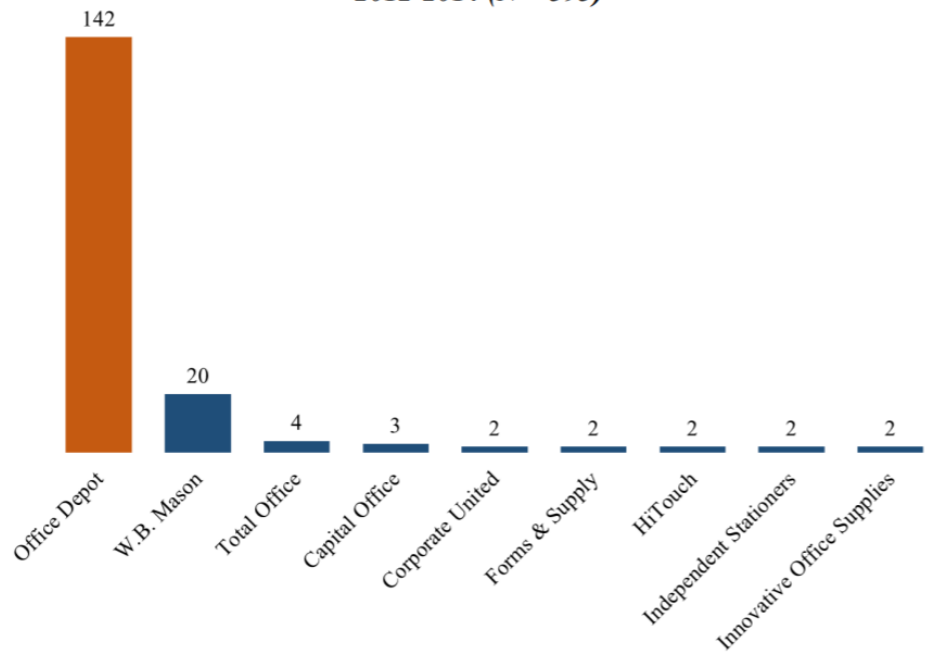


Note: Competitors listed have at least 2 wins. In total, 40 competitors are mentioned.
Source: Exhibit 10, Shapiro Report.

Additional evidence: Unilateral effects

1. Bidding data showed that Staples and Office Depot engaged in significant head-to-head competition
 - From Shapiro exhibit:

**Office Depot Dominates in Staples Win-Loss Data
with 142 Wins**
2012-2014 (N = 393)



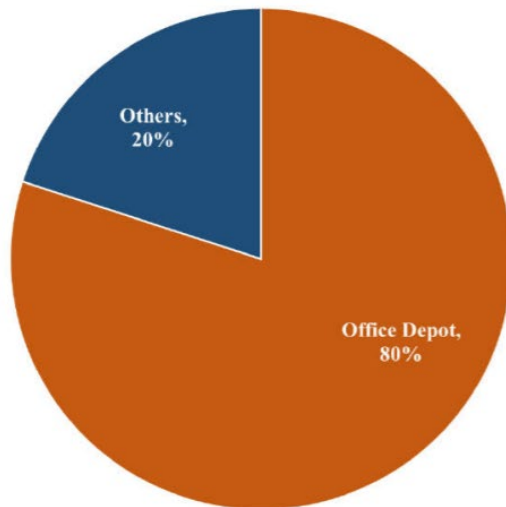
Note: Competitors listed have at least 2 wins. In total, 27 competitors are mentioned.
Source: Exhibit 11, Shapiro Report.

Additional evidence: Unilateral effects

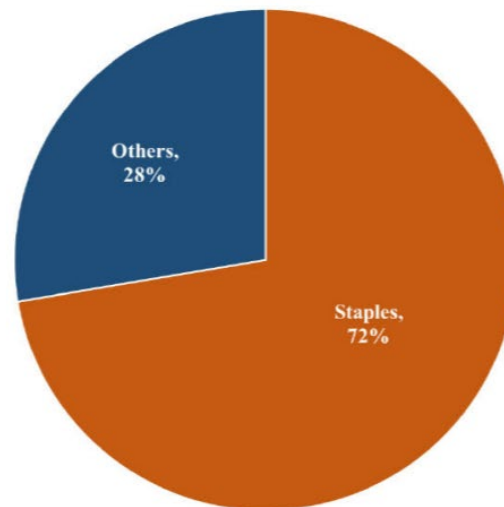
1. Bidding data showed that Staples and Office Depot engaged in significant head-to-head competition
 - From Shapiro exhibit:

Each Company's Top Losses Are to the Other *2012-2015*

Staples' Top 50 Losses Went To:



Office Depot's Top 50 Losses Went To:



Sources: Exhibits 17-18, Shapiro Report.

Additional evidence: Unilateral effects

2. B2B customers see the merging parties as each other's most significant, if not only, competitor
 - From Shapiro exhibit:

Customers Recognize Staples and Office Depot as Closest Competitors

- [REDACTED] (June, 2015): “Only two B2B providers, Staples and Office Depot, are left in the Office Supplies space since the merger of Office Depot and OfficeMax.”
- [REDACTED] (April, 2014): “Only two providers can support [REDACTED] requirements, Staples and Office Depot”
- [REDACTED] (November, 2013): “The Big Three are soon to become the Big Two, and will make up 75% of total market share”

Sources: See Shapiro Rpt. at 26 (citing PX07008, PX07001, PX07010).

Additional evidence: Unilateral effects

3. Party ordinary course of business documents show that each views the other as its most significant competitor

- From Shapiro exhibit:

Staples and Office Depot Recognize They Are Closest Competitors

- Staples (November, 2013): “There are only two real choices for customers. US or Them.”
- Office Depot (March, 2014): “only 2 primary players in the Enterprise space.”
- Office Depot (February, 2015): “I am sure you have heard the news today regarding the Staples acquisition.... I thought it was odd after the Max/Depot merger that global and large national organizations had basically only two options for office supplies. If this deal is approved that will dwindle to one.
For companies wanting savings, new terms, or additional incentives now is the time to ink those details in a long term contract. [sic] with Depot.”

Sources: See Shapiro Rpt. at 24-25, 40 (citing PX04082, PX05250, PX07175).

The District Court Opinion

2. Defendants' Rebuttal Arguments

Additional evidence of anticompetitive effect

Defendants' sole argument in response to Plaintiffs' *prima facie* case is that the merger will not have anti-competitive effects because [1] Amazon Business, as well as [2] the existing patchwork of local and regional office supply companies, will expand and provide large B-to-B customers with competitive alternatives to the merged entity.¹

■ Remember:

- ❑ Staples and Office Depot did not call any witnesses
- ❑ Evidence closed after the plaintiffs presented their case-in-chief

■ Queries:

- ❑ How did the defendants get support for these arguments into evidence?
- ❑ What was Staples' strategy here?

¹ FTC v. Staples, Inc., 190 F. Supp. 3d 100, 133 (D.D.C. 2016).

Amazon Business

■ Defendants' position:

- Amazon Business, a newly emerging company in the B2B space, would replace any lost competition
 - Started in 2015
- *WDC*: This is an expansion defense

■ Court: Rejected—Fails sufficiency and timeliness requirements

- Court: Although Amazon Business has some impressive strengths, it—
 1. Lacks of RFP experience
 2. Has no commitment to guaranteed pricing
 3. Lacks ability to control third-party price and delivery [half of AB's sales are through 3Ps]
 4. Has no ability to provide customer-specific pricing
 5. Lacks customer service agents dedicated to the B2B space
 6. Has no desktop delivery
 7. Has no proven ability to provide detailed utilization and invoice reports
 8. Lacks product variety and breadth
- Also, has a low market share projected for 2020, so are unlikely to provide significant additional competition in the four years following a Staples/Office Depot merger

Amazon Business

- WDC: The court could have gone further
 - Assume that Amazon is a committed expander
 - Consider the HHIs if Amazon had already expanded and taken 30% or even 50% of the business of each of Staples and Office Depot:

	Before Amazon		After Amazon (30%)		After Amazon (50%)	
	Share	HHI	Share	HHI	Share	HHI
Staples	47.3%	2237	33.1%	1096	23.7%	559
Office Depot	31.6%	999	22.1%	489	15.8%	250
Amazon	0.0%	0	30.0%	900	50.0%	2500
Others (6)	21.1%	74	14.8%	36	10.6%	19
TOTAL	100.0%	3310	100.0%	2522	100.0%	3328
Combined	78.9%	3310	55.2%	2522	39.5%	3328
Delta		2989		1465		747
Post		6299		3987		4075

- These are all in ranges in which the *PNB* presumption has been triggered and courts have found Section 7 violations
 - Not surprising, since even with Amazon as a major player, the transaction is a 3-to-2 merger with a fringe

WB Mason and other competitors

- Defendants' position:
 - *WB Mason* and other competitors would grow to replace any competition lost as a result of the merger
 - This is a type of entry/expansion defense
- Court: Rejected
 1. WB Mason is a regional supplier that targets 13 NE states and DC
 - \$1.4 billion in revenues
 2. Distant #3, with less than 1% market share
 - No customers in the Fortune 100
 - Nine customers in the Fortune 1000
 3. Does not have resources to serve nationwide customers
 4. Does not bid for large RFPs outside of "Masonville" [DC] (where it is located)
 5. CEO testified that WB Mason does not have the desire or ability to compete with the merged company outside of Masonville

WB Mason and other competitors

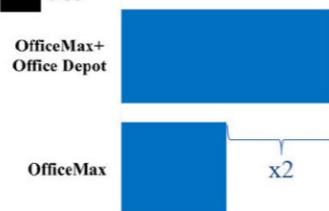
■ Court: Rejected

6. *Purchasing economies of scale*: Costs are higher than Staples and Office Depot, since WB Mason and other competitors must purchase through wholesalers rather than manufacturers

- From Shapiro exhibit:

Estimate of a COGS Gap Between W.B. Mason and Office Depot

- Based on estimates from OfficeMax-Office Depot merger, doubling in scale lowers COGS by █ %.



- W.B. Mason would need to double roughly █ times to match Office Depot's scale – implying a 6.0% gap.



WB Mason and other competitors

■ Court: Rejected

6. *Purchasing economies of scale*: Costs are higher than Staples and Office Depot, since WB Mason and other competitors must purchase through wholesalers rather than manufacturers

- From Shapiro exhibit:

Other Market Participants Have Higher COGS

- **W.B. Mason**: “I believe that no other vendor can consistently compete effectively with Staples or Office Depot on the cost of goods. They purchase far more volume from manufacturers than any other vendor. From my experience as a buyer of office supplies from manufacturers, I know Staples’ and Office Depot’s unmatched scale leads to unmatched buying power. WBM, as the third-largest office supplies vendor in the country, has some ability to obtain discounts from manufacturers, but not as much as Staples and Office Depot, so our cost of goods is higher.”
- [REDACTED]: “In terms of overall purchase volume, it is generally true that the more a customer buys the better the overall pricing and program incentive. As a result, Office Depot and Staples typically receive better combined pricing and program incentives based on their mix of purchases (less commodity/higher value mix) than do smaller independent dealers. Further, independent dealers often require additional services [REDACTED] (e.g., catalog support, marketing programs, digital platform support, etc.), which must be covered in the overall transactional pricing and incentive programs that they receive.”
- [REDACTED]: “Based on my experience working for [REDACTED] for over a decade, I am familiar with the difference in COGS that large companies like Staples and Office Depot can negotiate with manufacturers compared to [REDACTED]. Although it varies based on the commodity and manufacturer, I estimate that Staples and Office Depot are able to obtain a net cost differential (including back-end rebates) of about 5% to 25% lower [REDACTED].”

WB Mason and other competitors

- Court: Rejected

7. WB Mason would not commit to expand nationally even if Staples and Office Depot financed the expansion through a “cash divestiture”

WB Mason and other competitors

■ Court: Rejected

7. Other firms would not expand even in the event of a SSNIP

- From Shapiro's exhibit:

Competitor Views on Expansion

- [REDACTED]: “[REDACTED] has no specific plans to expand into any new markets.”
- [REDACTED]: “Even if Staples merged with Office Depot and the combined firm raised prices significantly (by 10%, for example), we would not alter our expansion plans. We currently do not have any excess physical capacity.”
- [REDACTED]: “[REDACTED] has no material plans to pursue large national or multiregional customers, like Fortune 1000 companies. [REDACTED] does not have the resources to expand our geographic footprint or invest in the services necessary to compete for these large customers, and I do not see [REDACTED] making these investments within the foreseeable future.”
- [REDACTED]: “[REDACTED] focuses on customers smaller than [the Fortune 1000], mostly within our primary operating region.”
- [REDACTED]: “[REDACTED] has] no foreseeable plans to materially expand our business to pursue large national or multiregional accounts, such as Fortune 500 companies.”
- [REDACTED]: “[REDACTED] would find it prohibitively expensive to make the investments necessary to compete for large business customers the way Staples and Office Depot do today.”
- [REDACTED]: “[REDACTED] lack of a national sales and distribution network has impeded our ability to win national accounts. . . . More often than not, we choose not to bid on national accounts, because...it is an exercise in futility.”

WB Mason and other competitors

- Court: Rejected
 - *Conclusion*: No evidence that supports defendants' contention that a collection of regional or local office supply companies could meet the needs of B2B customers

The District Court Opinion

3. Determining the Net Anticompetitive Effect

Determining the net anticompetitive effect

- Unnecessary to proceed to Step 3 of *Baker Hughes* since the defendants failed to produce sufficient evidence to put the prima facie case in dispute

It is fairly common in judicial decisions for courts to reach for “corner solutions”—finding a failure of proof in Step 1 or in Step 2 in order to avoid balancing in Step 3

The District Court Opinion

4. Balancing the Equities

The equities

- FTC: Equities in favor of entering preliminary injunction
 - Public interest in effectively enforcing antitrust laws
 - Public interest in ensuring that the FTC can order effective relief if it succeeds at the merits trial
- Merging parties: Equities in favor of denying the preliminary injunction
 - None addressed in the opinion

The canonical public equities

PI entered: May 10, 2016
Deal terminated: May 10, 2016

14. Elimination of Potential Competition

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

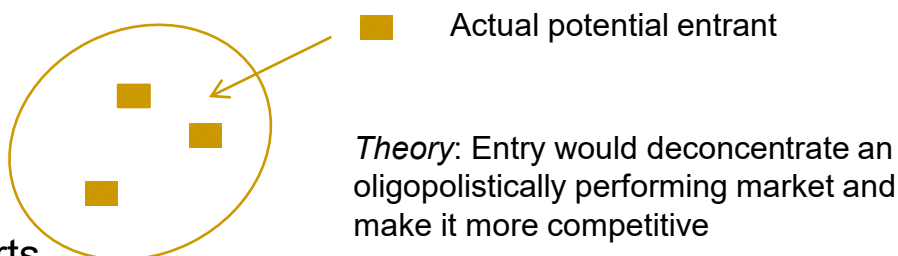
Three potential competition theories

1. Elimination of actual potential competition
2. Elimination of perceived potential competition
3. Elimination of a nascent competitor by a dominant firm

Actual potential competition

■ The idea

- An incumbent firm acquires a target that otherwise would have entered the market, reduced concentration, and increased competition
- → The acquisition of the “actual potential entrant” eliminates an increase in future competition that would have occurred but for the acquisition



□ Acceptance by courts

- The Supreme Court has reserved judgment on the elimination of actual potential competition¹
- Lower courts, the FTC, and the 1984 DOJ Merger Guidelines recognize the elimination of actual potential competition as an actionable anticompetitive harm under Section 7

□ Agencies have used this theory to obtain consent decrees when—

1. The market is highly concentrated,
2. There are few if any other similar or better situated actual potential entrants, *and*
3. Entry is almost certain in the immediate future

¹ See *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 625, 639 (1974); *United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 537-38 (1973).

Actual potential competition

- Five elements of the actual potential competition theory of harm
 1. *Noncompetitiveness*: The relevant market is operating noncompetitively
 2. *Uniqueness*: The actual potential entrant is relatively unique in its ability to enter the relevant market
 3. *Ability*: The actual potential entrant must have an “available, feasible means” of procompetitive entry
 4. *Incentive/likelihood of entry*: In the absence of the acquisition, the actual potential entrant would likely enter the relevant market “in the near future”
 5. *Procompetitive effect*: If the actual potential entrant in fact entered the market, it would enter at a scale that would materially improve the competitive performance of the market

Actual potential competition

■ Remedies

- Typically, requires the divestiture of the incumbent product
- Divestiture of assets of the actual potential entrant can be problematic—
 - Oftentimes, little to divest from the actual potential entrant (especially if only in the planning stages)
 - May be difficult to ascertain the commitment of the divestiture buyer to enter or the degree of success it is likely to have
- Exception: When—
 1. There are substantial assets related to entry to be divested, *and*
 2. There is strong reason to believe that the divestiture buyer will have at least as much success in entering as the divestiture seller

the agencies will accept the divestiture of entry-related assets

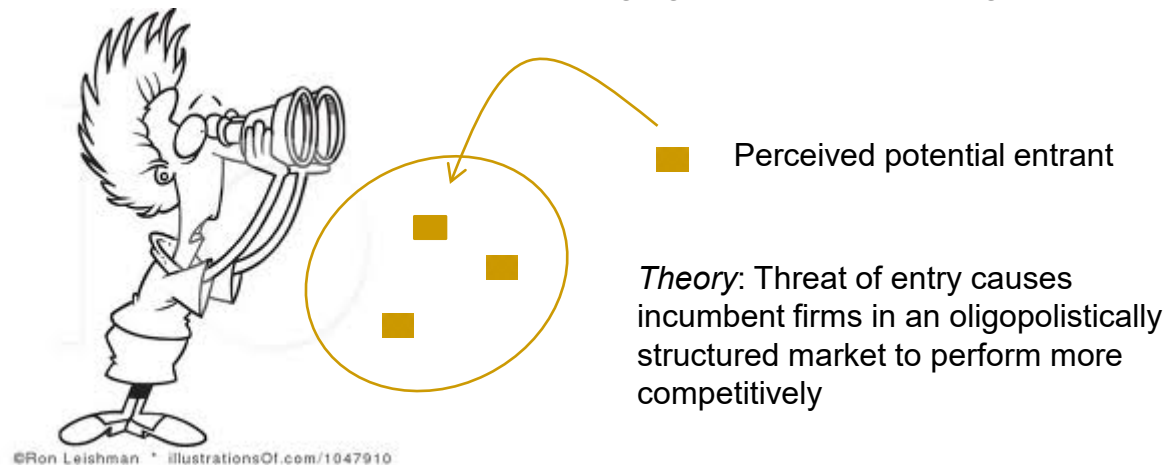
Perceived potential competition

■ The idea

- ❑ Incumbent firms fear the perceived potential entrant will enter the market and hence moderate their prices (“limit pricing”) to discourage that firm from actually entering
- ❑ An acquisition by an incumbent firm of the perceived potential entrant eliminates the threat of entry and incumbent firms no longer have an incentive to moderate prices

■ Theory recognized by the Supreme Court

- ❑ The Supreme Court has recognized the elimination of perceived potential competition as a valid theory of anticompetitive harm
- ❑ Ironically, the agencies have used the theory rarely (if at all) since 1980 since it is almost impossible to show that incumbent firms have engaged in limit pricing to discourage entry



Perceived potential competition

- Five elements of the perceived potential competition theory of harm
 1. *Noncompetitiveness*: The relevant market must be susceptible to operating noncompetitively
 2. *Uniqueness*: The perceived potential entrant is relatively unique in its ability to enter the relevant market
 3. *Perception*: Incumbent firms must perceive the firm as a likely potential entrant
 4. *Incumbent reaction*: Incumbent firms must be responding to the perceived threat of entry by lowering their prices (“limit pricing”), improving their product quality, or engaging in some other procompetitive activities in order to discourage the entry of the perceived potential entrant
 5. *Anticompetitive effect*: Removing the perceived threat of entry through the acquisition of the perceived potential entrant must likely result in incumbent firms ceasing some or all of their procompetitive entry-detering conduct and so lessen competition in the relevant market

Perceived potential competition

■ Remedies

- There is no remedy to preserve competition in a perceived competition case other than enjoining the acquisition

Potential expander cases

- *A slight variation: “Potential expander” cases*
 - A large firm enters the target market to “test the waters” and obtains a small market share
 - Typically by shipping into the target market from another market
 - But finding de novo entry unattractive, the firm acquires a substantial incumbent firm in the target market

At one time, the agencies have attacked these types of acquisitions as eliminating actual potential competition by the large firm

- Technically, the agencies may try these cases as horizontal acquisitions since the acquirer did have a “toehold” position in the relevant market. The agencies then argue that given the acquirer’s interest in expanding into the market, the acquirer’s small current market share significantly understates its future competitive significance in the absence of the acquisition
- Acquirers defend by showing that de novo entry is not in their profit-maximizing interest and that they are neither an actual potential entrant or a “potential expander” in the absence of the acquisition
- The agencies did not fare well in these cases, and they have not brought one recently on this theory

A final note

*Under any of these theories, the potential entrant
may be either the target or the acquirer*

Mylan/Perrigo



Mylan/Perrigo (2015)

■ The deal

- On September 14, 2015, Mylan launched a hostile tender offer to acquire all outstanding ordinary shares of Perrigo for approximately \$27 billion (stock and cash)

■ Mylan

- American global generic and specialty pharmaceuticals company
 - Makes the EpiPen (~ 40% of Mylan's profit)
- 2015 revenues: \$9.42 billion

■ Perrigo

- American international manufacturer of private label over-the-counter pharmaceuticals
- 2013 revenues: \$3.45 billion

■ Backstory

- Mylan may have wanted to acquire Perrigo to fend off a \$40 billion hostile offer from Teva Pharmaceuticals

Mylan/Perrigo (2015)

■ Actual overlaps (4)

1. Bromocriptine mesylate tablets
 - Treat conditions including type 2 diabetes and Parkinson's disease
2. Clindamycin phosphate/benzoyl peroxide gels
 - Treat acne
3. Liothyronine sodium tablets
 - Treat hypothyroidisms
 - Treats or prevents enlarged thyroid glands
4. Polyethylene glycol 3350 OTC oral solution packets.
 - Laxative used to treat occasional constipation

■ Potential future overlaps—Actual potential competition by Mylan (3)

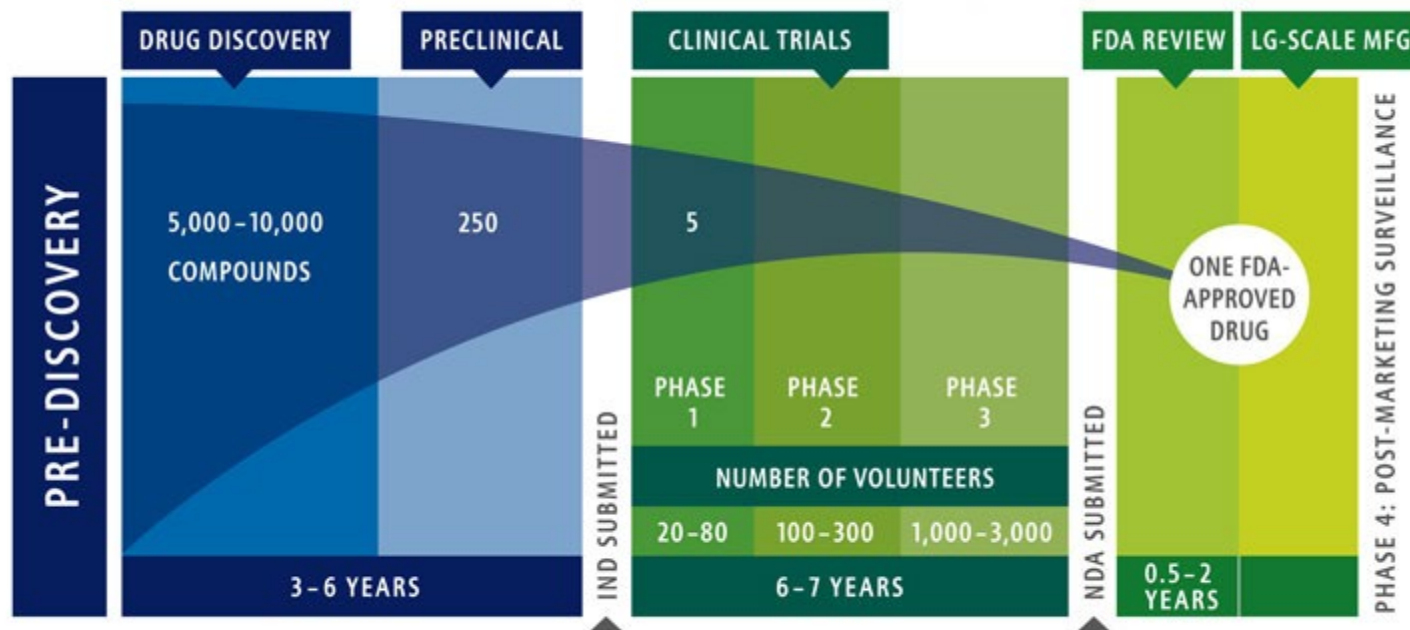
1. Acyclovir ointment
 - Slows the growth and spread of the herpes virus in the body
2. Hydromorphone hydrochloride extended-release tablets
 - Treats moderate to severe pain in narcotic-tolerant patients
3. Scopolamine extended-release transdermal patches
 - Prevents symptoms associated with motion sickness
 - Helps patients recover from anesthesia and surgery

Query: Why did the FTC conclude that Perrigo was an “actual potential entrant” into these drugs “in the near future”?

Mylan/Perrigo (2015)

- New drug approval process

Drug Discovery and Development: A LONG, RISKY ROAD



Source: Pharmaceutical Research and Manufacturers of America

Mylan/Perrigo (2015)

■ Generic drug approval process

□ Definition

- A generic drug is comparable to an existing brand name drug in dosage form, strength, route of administration, quality, performance characteristics, and intended use
 - Essentially a knockoff of a brand-name drug

□ Regulatory approval under the Hatch-Waxman Act¹

- **ANDA:** To encourage the introduction of generic drug equivalents as soon as a name-brand drug's patent expires (or is shown to be invalid), Congress and the FDA have created an abbreviated new drug application (ANDA) process
 - The application is "abbreviated" because it does not require the drug company to include preclinical (animal) and clinical (human) data to establish safety and effectiveness
 - Instead, the generic applicant must scientifically demonstrate that its product is *bioequivalent* to the name-brand drug
- **FDA approval:** Once the FDA approves the application, the applicant may manufacture and market the generic drug product
- **Exclusivity:** Under the Hatch-Waxman Act, the first approved applicant has 180 days of marketing exclusivity from the date it commercially introduces the product
 - Alternatively, if the applicant challenges the validity of the name brand patent, the exclusivity runs from the date of a court decision finding the patent invalid, unenforceable or not infringed (if that is an earlier date)

¹ Drug Price Competition and Patent Term Restoration Act of 1984, Pub L. No. 98-417, 98 Stat. 1585 (1984).

Mylan/Perrigo (2015)

- FTC challenges by stage of product development
 - Goes to the question of whether there will be actual entry in the absence of the acquisition
 - Mylan/Perrigo (2015)—Approved ANDA
 - Mylan ordered to all rights, title and interest in and to all assets related to the United States in the four Mylan existing overlapping products and the three Mylan ANDA-approved products to Alvogen Group, Inc., an experienced generic pharmaceutical company
 - Hikma/Custopharm (2022)
 - Custopharm ordered to retain Custopharm's assets related to the corticosteroid drug triamcinolone acetonide (TCA) to, Long Grove Pharmaceuticals, LLC, another portfolio company owned by the seller that would not be acquired
 - Long Grove ordered to operate and maintain Custopharm's TCA assets for four years
 - FTC may appoint a monitor to report on the companies' compliance with the order's requirements

Mylan/Perrigo (2015)

- FTC challenges by stage of product development
 - Allergan/Inamed (2006)—Phase III
 - Inamed ordered to divest its rights to clinical trials for the cosmetic botulinum toxin product Reloxin, which was in Phase III clinical trials
 - Sanofi/Aventis (2004)—Phase II/III
 - Aventis was ordered to divest its rights to clinical trials for the drug Camptosar, which included a study for treatment of metastatic gastric cancer which was in Phase II/Phase III of development
 - Cephalon, Inc./CIMA labs (2004)—Phase III
 - Cephalon was ordered to divest Actiq, a cancer pain drug, in Phase III of clinical testing
 - Glaxo Wellcome/SmithKline Beecham (2001)—Phase III
 - Glaxo was ordered to divest its rights in DISC-HSV Prophylactic Vaccines, which included a prophylactic herpes vaccine in Phase III clinical trials

Medtronic/Covidien (2014)



Medtronic
When Life Depends on Medical Technology



COVIDIEN

Medtronic/Covidien (2014)

■ The deal

- Medtronic to acquire Covidien for \$42.9 billion
 - Announced June 15, 2014
 - 29% premium to Covidien's closing stock price the day before announcement
 - Expect \$850 million in annual pretax cost synergies
 - Medtronic commits \$10 billion in additional U.S. technology investments over 10 years

■ Medtronic

- Global medical technology and services company

■ Covidien

- Global healthcare products company

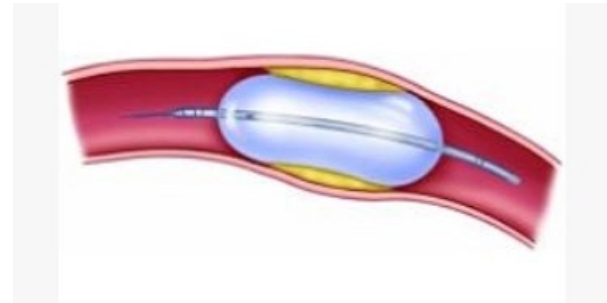
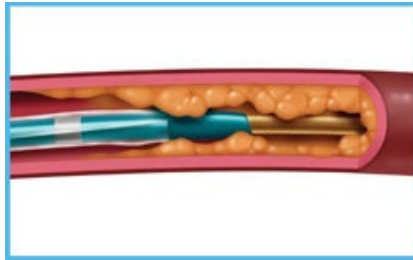
■ Combined company

- Combined revenue: \$27 billion
- 87,000 employees in more than 150 countries

Medtronic/Covidien (2014)

■ The FTC concern

- C.R. Bard was the only company manufacturing and selling drug-coated balloon catheters
 - Used primarily to treat peripheral artery disease, a narrowing of the peripheral arteries to the legs, stomach, arms, and head



- Medtronic and Covidien were developing drug-coated balloon catheters for the femoral popliteal (fem-pop) artery to compete with Bard
 - Only companies with products in clinical trials in the FDA approval process (but the complaint does not indicate what phase)
- ■ Merger of two actual potential entrants

■ Consent decree

- Medtronic to sell Covidien's rights and assets related to Covidien's drug-coated balloon catheters business to Spectranetics
 - Spectranetics was a leader in peripheral vascular solutions with a portfolio of products that is highly complementary to Covidien's drug-coated balloon catheter

Mallinckrodt/Novartis AG (2017)



Mallinckrodt/Novartis AG (2017)

■ The deal

- In June 2013, Questcor Pharmaceuticals acquired the rights to sell Synacthen Depot in the United States from Novartis
 - On August 14, 2014, Mallinckrodt plc acquired Questor for \$5.8 billion

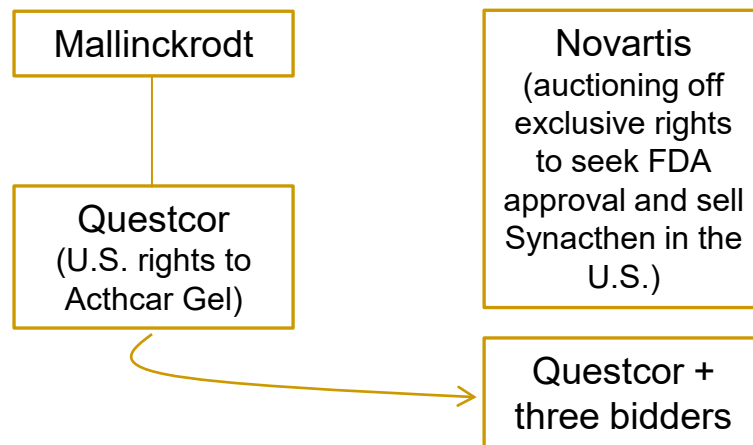
■ Background

- Questcor's H.P. Acthar Gel was the only therapeutic adrenocorticotrophic hormone ("ACTH") product sold in the United States
 - ACTH is the standard of care for infantile spasms ("IS"), a rare but extremely serious disorder involving seizures within the first two years of life
 - Questor acquired the rights to Acthar in 2001
 - Since 2001, Questcor has repeatedly raised Acthar's price from \$40 per vial in 2001 to more than \$34,000 per vial in 2017
 - A course of Acthar treatment for IS requires multiple vials and can cost well over \$100,000

Mallinckrodt/Novartis AG (2017)

■ The FTC's concern

- ❑ Synacthen is a synthetic ACTH drug sold in other parts of the world to treat IS
- ❑ In 2011, Novartis decided to sell the exclusive rights to seek FDA approval for Synacthen and commercialize it in the United States
- ❑ Three firms submitted formal offers to Novartis
- ❑ Subsequently, Questcor entered the bidding and outbid the other companies to acquire the U.S. rights to Synacthen



- ❑ *Allegation:* Questcor acquired the Synacthen rights to prevent another company from entering into competition with Acthar in the United States

Mallinckrodt/Novartis AG (2017)

■ The FTC's challenge

- Complaint filed January 18, 2017 (post-acquisition)
- Action brought in federal district court by FTC and five states
- Questcor's acquisition of the Synacthen rights violated—
 - Section 2 of the Sherman Act (monopolization)
 - Section 5 of the FTC Act
 - Various state statutes

■ Outcome

- Mallinckrodt settled and stipulated to the entry of a permanent injunction:
 - No actual litigation—Stipulation filed simultaneously with the complaint
 - Pay \$100 million (disgorgement)
 - Grant a license to develop Synacthen to treat infantile spasms and nephrotic syndrome to an FTC-approved licensee within 120 days of the entry of the order
 - Pay \$2 million to states for attorney's fees and costs
 - Monitor to oversee compliance

Steris/Synergy Health (2015)



Steris/Synergy Health (2015)

■ The deal

- Steris to acquire SynergyHealth for \$1.9 billion
 - Announced October 13, 2014

■ Steris

- Second largest sterilization company in the world (2014 revenues: \$604 million)
- Largest provider of gamma radiation sterilization services in the United States with 12 facilities
- Also has 10 ethylene oxide ("EO") gas sterilization facilities

■ SynergyHealth

- Third largest sterilization company in the world
- Operates more than 36 contract sterilization facilities outside of the United States
 - Primarily gamma radiation facilities
 - Daniken, Switzerland—a gamma ray/x-ray facility
 - Only facility in the world providing x-ray sterilization services on a commercial scale
- BUT currently offers only e-beam and EO sterilization services in the United States

Steris/Synergy Health (2015)

■ Three primary methods of contract sterilization used in the U.S.

1. Gamma sterilization

- Sterilizes by exposing products to photons from radioactive isotope Cobalt-60
- Good penetration complete even at high densities
- Compatible with most materials
- Only viable option for dense products and products packaged in larger quantities
- Turn-around time: Hours

2. E-beam sterilization

- Sterilizes by exposing products to ionizing energy (electrons) from electron beam
- Does not penetrate as deeply as gamma radiation
- Can be effective for low-density products sterilized in low volumes
- Represents only 15% of all contract radiation sterilization in the United States
- Turn-around time: Minutes

3. Ethylene oxide gas (EO)

- Sterilizes by exposing products to a sterilant gas to kill unwanted organisms
- Requires gas permeable packaging and product design
- Turn-around time: 9-10 days

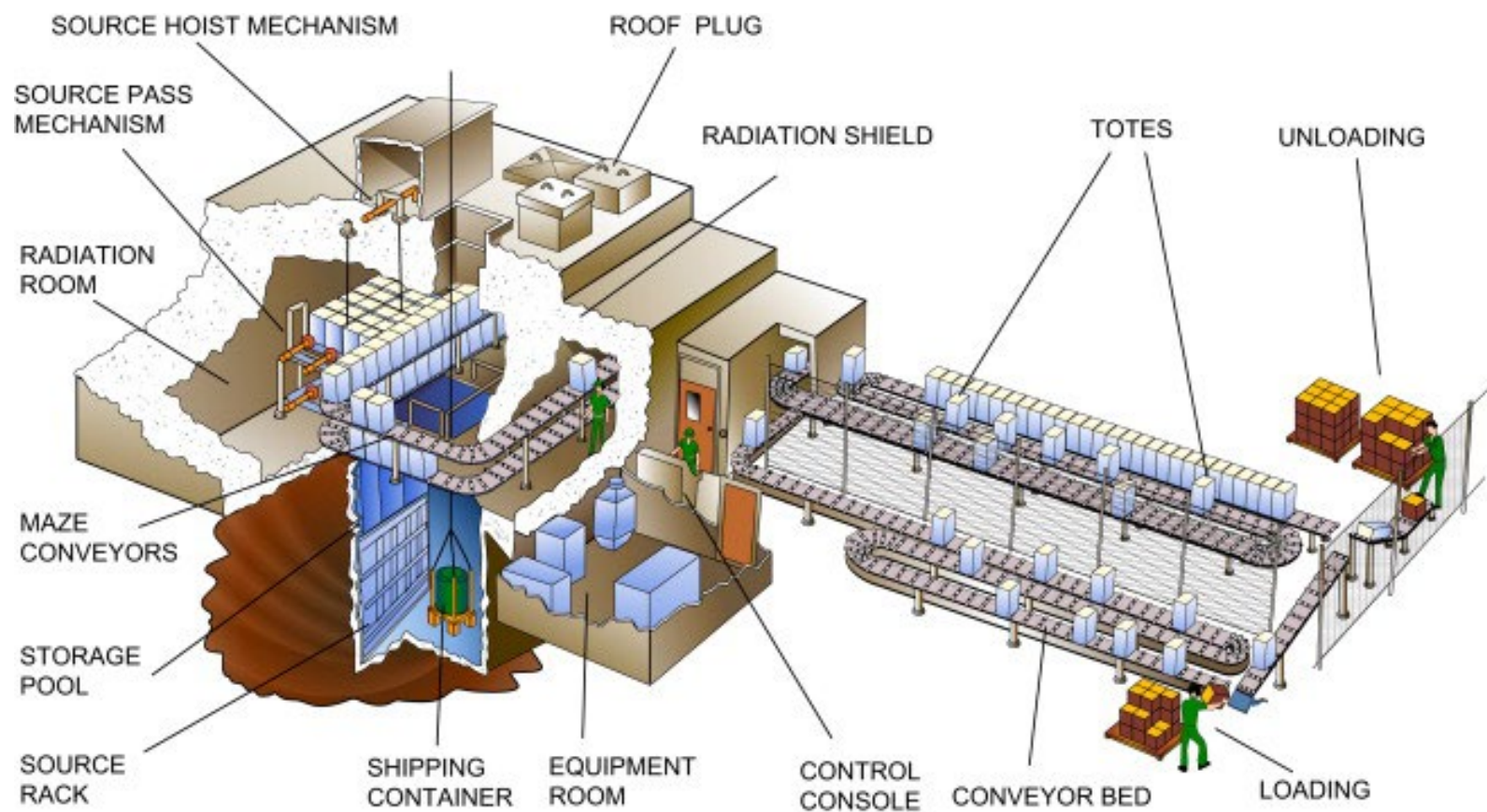
Steris/Synergy Health (2015)

- Customer choice calculus
 - Customers choose sterilization methods based on their products' physical characteristics and packaging



Steris/Synergy Health (2015)

Gamma Irradiation Services Plant



Steris/Synergy Health (2015)

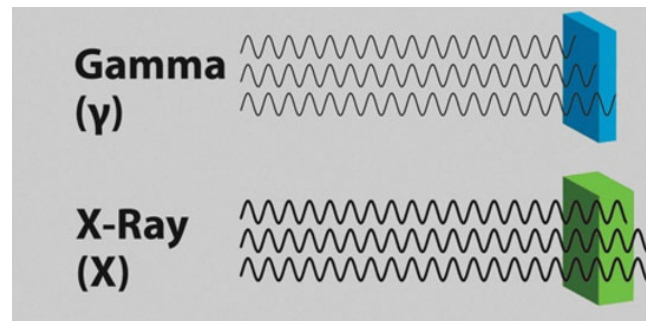
Gamma Irradiation Services Plant



Steris/Synergy Health (2015)

■ The FTC concern

- There are only two gamma radiation sterilization providers in the United States:
 - Sterigenics (14 facilities)
 - Steris (12 facilities)
- *Allegation:*
 - Absent the acquisition, SynergyHealth would have entered the U.S. with a new x-ray sterilization facility to compete directly with Sterigenics' and Steris' gamma sterilization services
 - According to the FTC, x-ray sterilization is a competitive alternative to gamma sterilization because it has comparable, "and possibly superior," depth of penetration and turnaround times



- *Claim:* Steris's acquisition of SynergyHealth insulated Steris' gamma sterilization services from SH's entry with x-ray sterilization

Steris/Synergy Health (2015)

■ FTC complaint

- Relevant product markets
 - Contract radiation sterilization services
 - Contract gamma and x-ray sterilization services to targeted customers that cannot economically or functionally switch to e-beam sterilization
- Relevant geographic markets—defined by facility location
 - “[W]ithin approximately [redacted] miles of each of the locations where Synergy planned to build an x-ray sterilization plant”
- Likely anticompetitive harm
 - Elimination of a unique actual potential entrant

Steris/Synergy Health (2015)

■ District court

- Following a three-day evidentiary hearing, the court denied the FTC's request for a preliminary injunction
- Assumed the elimination of actual potential competition is a cognizable theory
 1. Highly concentrated market
 2. Alleged potential entrant "probably" would have entered the market
 3. Such entry would have had procompetitive effects
 4. Few if any other firms could enter the market effectively

NB: This test differs somewhat from the test we developed since it lacks a timing element SynergyHealth's entry but for the acquisition (but not important here)

□ *Court:*

- Prior to the hearing, the Court directed the parties to focus their attention on the second element of the actual potential competition theory (likelihood of entry)
- After the hearing, found that the FTC failed to show that Synergy probably would have entered the U.S. but for the transaction

Steris/Synergy Health (2015)

Remember, the deal was announced on October 13, 2014

■ The evidence

□ March 2012

■ SH acquires Daniken from Leoni Studer Hard

- Provides gamma and x-ray irradiation sterilization services to the medical device, pharmaceutical, and packaging industries
- Includes a Swiss x-ray sterilization facility but only operating at 20% capacity

■ Possible entry into the United States

- Dr. Richard M. Steeves, SH CEO, pursued the LSH acquisition thinking about possible entry into the United States with x-ray sterilization in up to five locations
- Recognized the opportunity to use x-ray technology to compete with the gamma ray facilities of Sterigenics and Steris and capture more than \$120 million of revenue away from them
- A project of this size would require approval of SH's Board of Directors

□ October 2012 — November 2013

■ Steeves and his project team made several presentations to Senior Executive Board and the Board of Directors regarding possible entry into the United States

- Believed that SH could compete in the U.S. only through x-ray sterilization given the lock on gamma radiation sterilization by Sterigenics and Steris

■ But also recognized certain business needs to make entry viable and receive Board approval:

1. Lowering the capital costs of entry
2. Overcoming customer reluctance to switch sterilization modalities
3. Obtaining revenue commitment from a base load of customers in the form of take-or-pay contracts

Steris/Synergy Health (2015)

■ The evidence

□ May 2014

■ Presentation to the Senior Executive Board

- SEB approval a prerequisite to Board approval
- SEB raised concern that “it would be difficult to guarantee getting take or pay contracts to support the financial model for building these facilities”

□ July 2014

■ Second presentation to the Senior Executive Board

- Same concern about customer recruitment
- Despite substantial customer interest, no customer had “given an indication that they would be willing to enter into a long term take or pay contract”

□ September 2014

■ Third presentation to the Senior Executive Board

- Sought SEB approval for a strategy offering dual x-ray/e-beam sterilization at a network of four to five facilities in the United States in two phases
 - Assumed a 15% market share in gamma/x-ray sterilization in 2018
 - Assumed 100% capacity utilization of the first two plants by the end of year 6
 - Assumed a lower price for x-ray (\$2.50/cubic foot) vs. gamma (\$3-\$4/cubic foot)
- SEB approved strategy (but not funding for execution)—But expressed concern that:
 - None of the assumptions were locked down
 - “[D]ifficult to get a base load customer to bear any risk of X-ray given that it is new and unproved in the US”

Steris/Synergy Health (2015)

■ The evidence

□ October 2014

- *October 9:* SH asks its sales staff to solicit customer letters of interest in using a new x-ray facility
- *October 13: Steris/SynergyHealth deal announced*
- *October 21:* Project leader tells team that “the x-ray project was proceedings as planned”
- *October 30:* SH pays £600k to IBA for an exclusive option for x-ray technology to be deployed in the U.S.
 - IBA was the only manufacturer in the world that could possibly make an x-ray machine powerful enough to sterilize medical devices on a commercial scale
 - Had the effect of excluding third parties from using IBA to build an x-ray machine in the United States, but it was not a contract to build for IBA to build any machine for SH
 - Also unclear whether IBA could build a machine at the power level required by SH

□ November 2014

- *Steris files HSR form for SH acquisition*
- SH scouts locations in Dallas/Fort Worth to develop costs for locating a facility there

□ December 2014

- *December 10: Steris pulls and refiles HSR form for SH acquisition (to expire on January 9, 2015)*

Steris/Synergy Health (2015)

■ The evidence

□ January 2015

- *January 9: FTC issues second request*
- IBA informs SH that the price of an x-ray machine is increasing significantly

□ February 2015

- SH project management lacks confidence that IBA could produce an x-ray machine at the required power:

“Their story kept changing so I was skeptical. I was probably more than 50 percent confident that they could ultimately get there over time, but there were no guarantees.”

- Undisputed that there was no machine in existence at the time that satisfied SH’s requirements
- *February 24:* SH sends declaration to the FTC saying that it is terminating its U.S. x-ray project
 - Despite “full-court efforts,” no success in obtaining customer commitments
 - SH provided full documentation of efforts made with the 34 best candidates to provide a viable processing volume
 - No significant customer remained to be contacted
 - All SH could obtain was six nonbinding letters of interest
 - Five of SH’s top customers stated that they have no present interest in using x-ray sterilization
 - The \$40 million Phase I cost would consume SH’s entire discretionary budget for 2016

Steris/Synergy Health (2015)

■ The evidence

- March 2015
 - *Extends drop-dead date to July 15, 2015*
- April 2015
 - *April 30: Parties certify compliance with second requests*
- May 2015
 - *May 29: FTC informs parties that it will challenge the transaction and files Section 13(b) complaint*

Steris/Synergy Health (2015)

- FTC argument on likelihood of entry
 1. Synergy was poised to enter the U.S. market in Fall 2014 by constructing one or more x-ray facilities
 2. The merger with Steris caused Synergy to abandon the effort
 3. Documents created and testimony given after the merger was announced should be viewed with a high degree of suspicion

Steris/Synergy Health (2015)

■ Court: Rejects FTC's arguments

1. While Synergy's PLC Board had endorsed the U.S. x-ray strategy in September 2014—
 - The business plan had not been approved
 - There were significant obstacles that the project team knew needed to overcome in order to win Board approval
 - The only Board-approved expenditures were two payments of £300K to IBA to obtain exclusivity in the United States
2. The announced merger with Steris in October 2014 had no significant impact on Synergy's plans for U.S. x-ray
 - The project team continued to mobilize the employees under their direction to—
 - Obtain customer buy-in
 - Try to bring down the cost of the new facilities, and
 - Work with IBA to develop a dual-capability machine of sufficient power to meet Synergy's needs
3. It was the project team leader, not CEO Steeves, who made the decision in February 2015 to discontinue the U.S. x-ray project after he concluded that there was little to no likelihood of obtaining SEB approval, let alone approval from a combined Synergy/Steris board

Meta/Within (2022)



Eliminating “Nascent” Competition

“Nascent competitors”

- An emerging concern in 2020 was the failure of the enforcement agencies to block acquisitions of “nascent competitors” by large tech companies
 - A “nascent competitor” is a firm that has the potential present a serious threat in the future to a dominant firm
 - The threat usually resides in the nascent competitor’s development of a new technology or a new product that could possibly shift share away from the dominant firm
- Nature of the competitive threat to the dominant firm
 - The “nascent competitor” may itself develop a product that competes with the dominant firm, or
 - The “nascent competitor” may be acquired by, or license its technology to, another firm that would use the technology to develop a product that competes with the dominant firm

“Nascent competitors”

■ Typically cited examples:

□ Facebook’s acquisition of Instagram and WhatsApp¹

- At the time of Facebook’s acquisition, neither Instagram nor WhatsApp posed an immediate competitive threat to Facebook, but if left independent of Facebook they might have developed a competitive product or be acquired by another firm that would use their technology to develop a product competitive with Facebook

□ Visa’s proposed acquisition of Plaid²

- Challenging Visa Inc.’s proposed \$5.3 billion acquisition of Plaid Inc. under Clayton Act § 7 and Sherman Act § 2 (monopoly maintenance). The complaint alleged that Visa is a monopolist in online debit transactions (70%) and that Plaid was developing a new technology that could be used as a part of a disruptive, lower-cost option for online debit payments. The complaint alleged that Visa’s CEO viewed the acquisition as an “insurance policy” to protect against a “threat to our important US debit business” and that if Plaid remained free to develop its competing payment platform, then “Visa may be forced to accept lower margins or not have a competitive offering.” The complaint concluded that if Visa was allowed to acquire Plaid, consumers would be deprived of a low-cost alternative to visa debit and new innovators in online debit payment solutions would face increased barriers to entry.
- *Note:* The complaint also alleged that Plaid was in fact developing an alternative to Visa online debit card, although it did not allege when Plaid's alternative would be available in the market or how successful it was likely to be.

¹ First Amended Complaint for Injunctive and Other Equitable Relief, FTC v. Facebook, Inc., No. 1:20-cv-03590 (D.D.C. filed Aug. 19, 2021).

² Complaint, United States v. Visa Inc., No. 3:20-cv-07810 (N.D. Ca. Nov. 5, 2020).

“Nascent competitors”

- Nascent competitors and the potential competition doctrine
 - The actual potential competition doctrine requires, among other things, that:
 - But for the acquisition, the putative potential entrant must have sufficient incentive and ability to enter the market to make entry in the near future likely, and
 - Assuming it occurred, such entry must materially improve the competitive performance of the market
 - By their nature, “nascent competitors” fail to satisfy these requirements
 1. At the time of the acquisition, the nascent competitor may not be actively considering entering the market with a product competitive with the acquiring dominant firm
 2. It may be uncertain that, in the absence of the acquisition, the nascent competitor (or a third-party acquirer or licensee) would create a product competitive with the dominant firm
 3. Even if the nascent competitor contemplates entry with a competitive product, the timing for entry may be more distant than in “the near future”
 4. Even if the nascent competitor contemplates entry in the near future, the technological and commercial success of this entry—and the competitive impact of entry—may be highly speculative
 - Under the further rigid requirements of the actual potential doctrine, it does not appear very likely that the doctrine makes the acquisition of a “nascent competitor” actionable under Section 7

“Nascent competitors”

- The policy argument for challenging “nascent competitor” acquisitions¹
 - Some academics and antitrust enforcers argue that antitrust law should prohibit well-entrenched dominant firms (think Facebook, Google, Amazon) from acquiring nascent competitors either:
 - At all, or
 - Without a compelling procompetitive justification on which the dominant firm would bear the burden of proof
 - Proponents of aggressive enforcement action against “nascent competitor” acquisitions by a well-entrenched dominant firm argue that it is so socially important to competitively undermine the dominant firm and restore some degree of competition in the market that it is in the public interest—
 - to accept large numbers of Type 1 overinclusiveness errors (blocking acquisitions that in fact would never develop into a meaningful competitive threat to the dominant firm either on their own or in the hands of another acquirer)
 - in order to preserve the opportunity for those few companies that, if not acquired by the dominant firm, would develop into a meaningful competitive threat

¹ See, e.g., Lina Khan, *The Separation of Platforms and Commerce*, 119 Colum. L. Rev. 973 (2019); Jonathan B. Baker & Fiona Scott Morton, *Confronting Rising Market Power, Economics for Inclusive Prosperity* (May 2019), C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. Pa. L. Rev. 1879 (2019); Eleanor M. Fox, *Platforms, Power, and the Antitrust Challenge: A Modest Proposal to Narrow the U.S.-Europe Divide*, 98 Neb. L. Rev. 297, 313-14 (2019).

The Section 2 solution

■ Sherman Act § 2

- To deal with the apparent inability of Section 7 under prevailing case law to reach acquisitions of nascent competitors by well-entrenched dominant firms, proponents of aggressive intervention have suggested that enforcers use Sherman Act § 2
- Section 2 prohibits “monopolization” and “attempts” to monopolize
 - Monopolization: Two elements (*Grinnell*)—
 - “(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”¹
 - Conduct satisfying the second element is called an anticompetitive exclusionary act
 - Attempted monopolization: Three elements (*Spectrum Sports*)—
 - The defendant must have engaged in predatory or anticompetitive conduct
 - with a specific intent to monopolize, *and*
 - as a consequence of its acts and intent, have a dangerous probability of achieving monopoly power²

¹ United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966); accord *Pacific Bell Tel. Co. v. Linkline Commc’ns, Inc.*, 555 U.S. 438, 447-48 (2009); *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 595-96 (1985).

² *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993).

The Section 2 solution

■ Sherman Act § 2

□ The idea

- The idea—as yet untested in the courts—is that the acquisition of a nascent competitor by a firm with monopoly power is an anticompetitive exclusionary act that maintains the dominant firm’s monopoly power and so can predicate monopolization or attempted monopolization
- The principal authority is the D.C. Circuit’s *Microsoft* decision, where the court required only a showing that “as a general matter, the exclusion of nascent threats is the type of conduct that is reasonably capable of contributing significantly to a defendant’s continued monopoly power.”¹
 - Arguably, this requirement focuses on the “general tendency” of the anticompetitive conduct, not its specific effects in any acquisition²
 - There is also an argument that evidence of the “intent” of the acquiring dominant firm to protect its position by making the acquisition should have significantly greater weight in a Section 2 than in a Section 7 case

¹ United States v. Microsoft, 253 F.3d 34, 78-79 (D.C. Cir. 2001) (en banc).

² D. Bruce Hoffman, Dir. Bureau of Competition, Fed. Trade Comm’n, [*Antitrust in the Digital Economy: A Snapshot of FTC Issues*](#) 10 (May 22, 2019).

Reinterpreting Section 7

■ The incipency standard

- Section 7 prohibits mergers and acquisitions that “may be substantially to lessen competition, or to tend to create a monopoly”¹
- Courts have interpreted this language to adopt an *incipency standard* requiring only a showing of a “reasonable probability” at the time of suit of anticompetitive harm²

■ A possible reinterpretation

- Under the case law, Section 7’s incipency standard looks just to the *likelihood* of harm to competition
 - *Conventional (defense) wisdom*: The acquisition of a nascent competitor does not violate Section 7 because the likelihood of anticompetitive harm is speculative and hence not “reasonably probable”
- *Argument*: But from a consumer welfare perspective, reasonableness should be interpreted in terms of the *expected value* of the harm, not just likelihood
 - So a low probability of anticompetitive harm should be “reasonable” within the meaning of the incipency standard if the magnitude of the harm, should it occur, is high enough
 - This interpretation could reach nascent competitor acquisitions, if the foregone competitive benefit of entry, should it occur, is sufficiently high
 - An expected value analysis also should consider any offsetting procompetitive benefits of the acquisition

¹ 15 U.S.C. § 18.

² United States v. E. I. du Pont de Nemours & Co., 353 U.S. 586, 589 (1957); *accord* United States v. ITT Cont’l Baking Co., 420 U.S. 223, 242 (1975); Brown Shoe Co. v. United States, 370 U.S. 294, 325 (1962).

The legislative solution

- Other proponents see a judicial extension of Section 2 law to cover acquisitions of nascent competitors by dominant firms as likely to succeed in the courts and therefore seek a legislative solution¹

¹ See, e.g., Steven C. Salop, *New U.S. Antitrust Legislation before Congress Must Mandate an Anticompetitive Presumption for Acquisitions of Nascent Potential Competitors by Dominant Firms* (Washington Center for Equitable Growth June 22, 2021).

The opponents respond

“Nascent competitor” acquisitions tend to add useful new features to products consumers already love, eliminate little or no current competition, supply the acquired firm’s users with far greater support and innovation, and provide a valuable exit ramp for investors, encouraging future investments in innovation. Consumer harm is at best speculative. And most importantly, critics have identified no instances in which meaningful competition has been lost or consumers harmed.

This is not to say that antitrust should ignore theories of future competition: The standards for intervening in potential competition cases have been too strict and should be expanded, but antitrust intervention should still be based on reasonable probabilities, not ephemeral possibilities. Nascent competitor acquisitions should not be prevented absent proof of at least a reasonable probability of a lessening of competition in the foreseeable future.¹

¹ Jonathan Jacobson & Christopher Mufarrige, [*Acquisitions of “Nascent” Competitors*](#), The Antitrust Source, Aug. 2020., at 1-2 (footnote omitted).

Some questions

- Whether through an extension of the actual potential competition doctrine under Section 7, the application of Section 2, or the creation of a new statutory provision, some questions arise:
 1. How dominant must the acquiring be?
 - Is it enough that the acquiring firm has a high market share?
 - Or does the acquiring firm have to be a well-entrenched, durable monopoly?
 2. How much of a threat is required to be of competitive concern?
 - What is the nature of the required evidence of the threat?
 - Bad documents and statements of the acquiring company could be very probative here
 - But companies should quickly adjust to minimize the creation of this evidence
 - Documents and statements of the target company as to its plans and risks in developing and commercializing its technology
 - Documents created and statements made before the prospect of the acquisition arose will be the most persuasive
 - Testimony by third-party experts as to the potential of the technology?

Some questions

3. How big does the threat have to be?
 - Is it enough if the nascent competitor could be expected to eventually capture 2% (or 5% or 10%) of the market?
4. How unique does the threat have to be?
 - What if there are other companies are developing similar or substitute technologies that are not being acquired by the dominant firm?
 - Does it matter if the target is significantly ahead of its competitors in developing the technology by six months? One year? Two years?
5. How likely does the threat need to be?
 - If there is no probability that the nascent firm will become a significant competitor, there is no sound basis to block the deal
 - But how high does the probability need to be (even qualitatively)?
6. How quickly must the threat be likely to materialize into real-world competition in the absence of the dominant firm's acquisition?
 - Two years? Three years? Any time in the foreseeable future?

Some questions

7. What kind of defenses, if any, are available to a dominant firm acquiring a nascent competitor?
 - What if the acquiring dominant firm can prove that significant consumer welfare benefits will result from the acquisition?
 - There is a subsidiary question of which party should bear the burden of proof (production or persuasion) on any defenses

Some questions

- We can also imagine three types of nascent competitor acquisitions
 1. Acquisitions where the acquiring dominant firm plans on investing significantly in the new technology and bringing it to market either as a new product or a feature improvement on an existing product
 2. Acquisitions where the acquiring dominant firm does not plan on investing in the new technology but instead will redirect the efforts on the acquired company's R&D and product development teams to different technologies or products
 3. "Killer acquisitions," where the acquiring dominant firm intends to suppress the acquired technology postmerger¹

¹ See Colleen Cunningham, Florian Ederer & Song Ma, *Killer Acquisitions*, 129 J. Pol. Econ. 649 (2021) (estimating that estimate that 6 percent of all acquisitions in the U.S. pharmaceutical sector (or 45 of acquisitions each year) are "killer acquisitions").

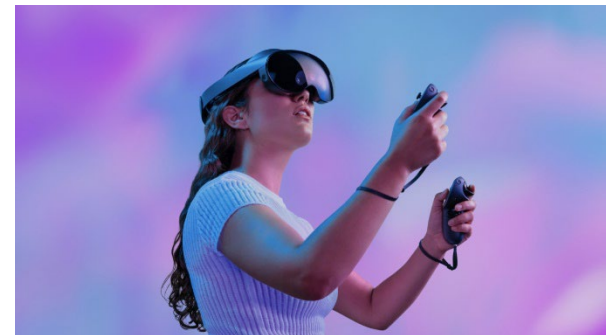
Meta/Within (2022)

■ The deal

- Meta for acquire Within Unlimited (reportedly for around \$400 million)
 - Announced November 1, 2021

■ *The buyer: Meta*

- Formerly known as Facebook
- The leading developer of virtual reality ("VR") devices and apps through its Reality Labs division
 - Since 2017, has invested 36 billion in Reality Labs for an operating loss of \$30.7 billion
 - Leading hardware product: Oculus Quest VR headset
 - Flagship product: Meta Quest Pro (\$1499)
 - Leading software product: Beat Saber



Meta/Within (2022)

■ *The target:* Within Unlimited

- A privately held virtual and augmented reality company
- Flagship product: *Supernatural*, a VR subscription fitness service
 - The leading VR fitness app (monthly subscription: \$18.99)
 - Offers over 800 fully immersive VR workouts, each set to music and located in a virtual setting such as the Galapagos Islands and the Great Wall of China



Meta/Within (2022)

■ The background

- ❑ Challenges Meta's proposed acquisition of privately-owned Within Limited, Inc., the maker of the popular virtual reality-dedicated fitness app Supernatural.

■ The amended complaint

- ❑ Alleges that the acquisition would eliminate competition in the relevant market for VR dedicated fitness apps
- ❑ Does not allege that Meta currently competes in the relevant market or that Meta is currently developing or has plans to develop a competing dedicated fitness app
- ❑ Rather, alleges that Meta would develop its own dedicated fitness app (perhaps extending the functionality of its Beat Saber rhythm app) if it was prevented from acquiring Within given its hopes of "controlling a VR 'metaverse.'"
- ❑ The complaint also alleges that "[t]he acquisition of new users, content, and developers each feed into one another, creating a self-reinforcing cycle that entrenches the company's early lead" (entrenchment—Compl. ¶ 6) and a "wings" effect, including on Within (perceived potential competition—Compl. ¶¶ 11, 106, 111-116 (all redacted)).

Postscript: Meta/Within

■ Significance

- This is an extension beyond what current law recognizes under the actual potential competition theory of anticompetitive harm

■ Note

- The original complaint did try to make out a horizontal overlap by alleging that Within and Meta's Beat Saber are both in the VR fitness app market (Compl. ¶ 12), although this appears to be more of afterthought to enable the Commission to invoke the *PNB* presumption than a central theory of anticompetitive harm
 - The FTC abandoned this claim in its Amended Complaint filed October 7, 2022

Meta/Within (2022)

- Sounds like an actual potential competition case
- BUT the complaint does not allege—
 - The VR dedicated app fitness market is operating noncompetitively
 - Meta is one of the few firms positioned to enter the VR dedicated fitness app market in the near future
 - Meta was developing or had plans to develop a competing dedicated fitness app absent the acquisition, or
 - Meta's entry, if it occurred, would make the VR dedicated fitness app market more competitive

Meta/Within (2022)

■ Procedural status

July 27, 2022	Section 13(b) complaint in the Northern District of California
August 5, 2022	So ordered stipulation that merging parties would not close the transaction until after 11:59 p.m. ET on December 31, 2022
August 23, 2022	Joint stipulation dismissing Mark Zuckerberg as a respondent
August 26, 2022	Answers filed
October 7, 2022	Amended complaint filed (dropping the horizontal count)
October 13, 2022	Defendants' move to dismiss the complaint as contrary to law
October 31, 2022	FTC files its memorandum of points and authorities in support of its motion for a preliminary injunction
December 8, 2022	Trial starts (providing for five trial days between December 8 and December 20)

Class 25 slides

Unit 17: UnitedHealth/Change

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center



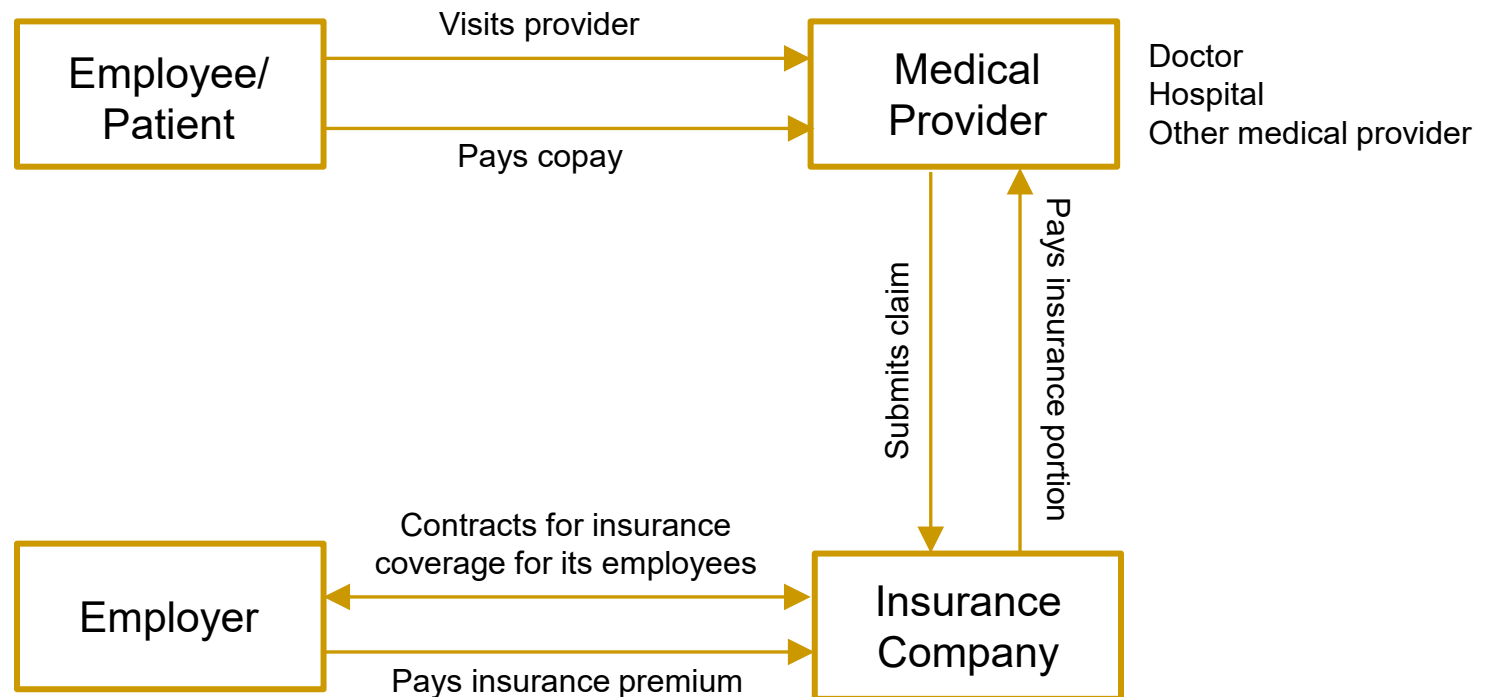
UnitedHealth Group®

CHANGE
HEALTHCARE

The Health Insurance Process

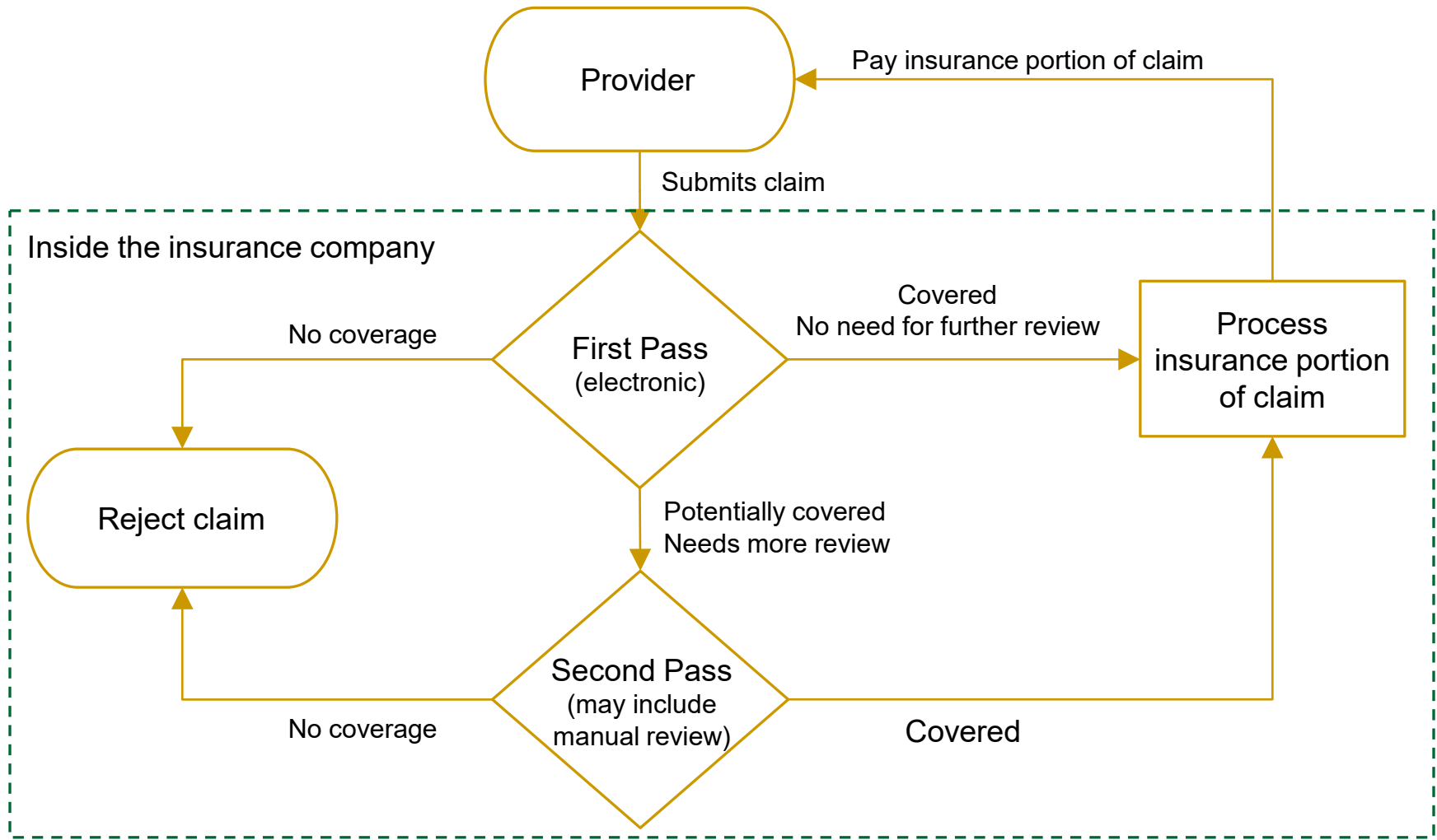
The health insurance payment process

■ Overview



The health insurance payment process

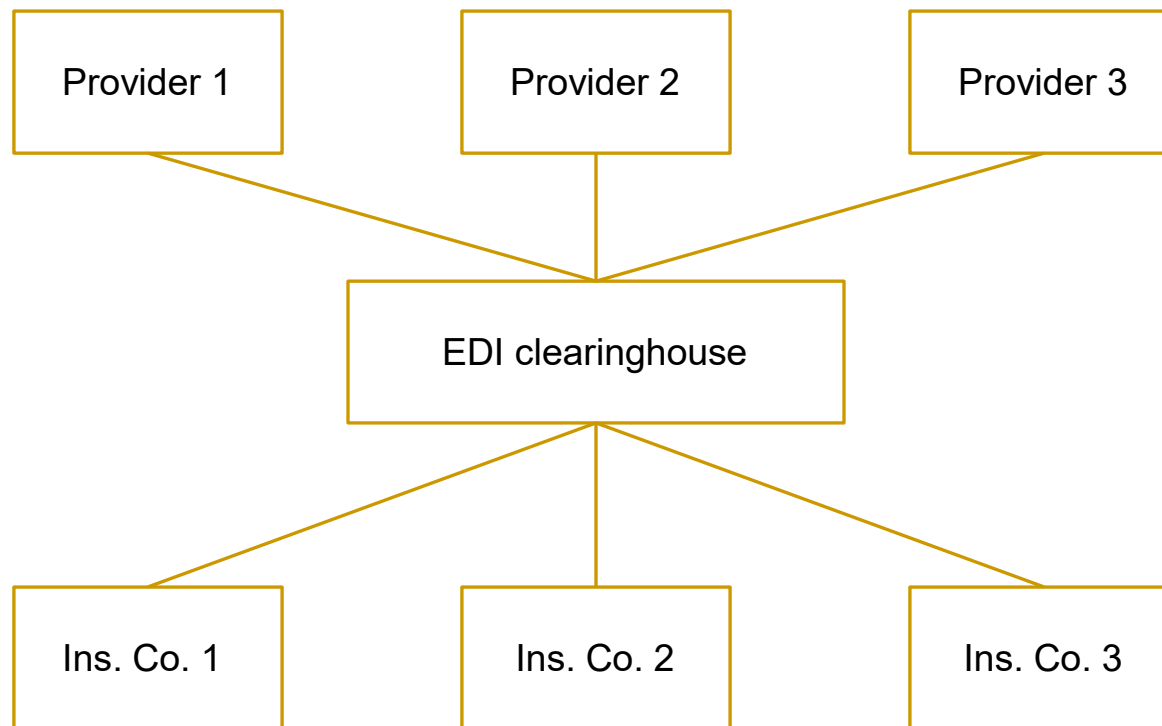
- The “first pass/second pass” claims editing (review) process



The health insurance payment process

■ EDI clearinghouses

- Enable the electronic transmission of claims, remittances, and other information between and among payers and providers



The Deal

The deal

- UnitedHealth Group (UHG) to buy Change Healthcare
 - Merger Agreement signed January 5, 2021 (and announced January 6, 2021)
 - Purchase price: \$13 billion
 - \$7.84 billion in cash to be paid to Change shareholders
 - Assumption of Change's \$5 billion in debt
 - 41% premium over Change's closing price on January 5
 - Drop-dead date
 - Originally January 5, 2022, with an extension to April 5, 2022, if the antitrust conditions have not been satisfied
 - Extended on April 4, 2022, to December 31, 2022
 - Added an antitrust reverse termination fee of \$650 million in connection with the extension

The parties

- UnitedHealth Group (UHG)
 - UnitedHealthcare
 - Nation's largest commercial insurer—covers 50 million people
 - Optum
 - *OptumHealth*: Offers care delivery and management
 - *OptumRx*: Offers pharmacy services
 - *OptumInsight*: Offers healthcare software solutions and services
 - Claims Edit System: Claims editing solution



The parties

■ Change Healthcare

□ Software and Analytics

- Includes ClaimsXten: Market leader in first-pass claims editing
 - 70% market share
 - 99% customer retention

□ Network Solutions

■ Products

- Facilitates financial, administrative, and clinical transactions
- B2B and C2B payments
- Aggregation and analytical data services

■ Provided through Change's EDI clearinghouse

- Largest EDI clearinghouse in the United States

□ Technology Enabled Services

- Provides revenue cycle management, value-based care, pharmacy benefits administration, and healthcare consulting



Deal rationale

Benefits of Combination with Change Healthcare

- By combining our products and expertise with those of Change Healthcare, we can increase efficiency and reduce friction in health care, producing a better experience and lower costs.
- Simply put, with this new combination, Optum will help improve the quality of health care delivery, automate claims transactions, and accelerate payment between provider and payer. We will accomplish this through aligning clinical decision making, improving claims accuracy, and simplifying payment.
- The combination of capabilities can improve healthcare by:
 - Helping health care providers and payers better serve patients by more effectively connecting and simplifying key clinical, administrative and payment processes.
 - Promoting better patient outcomes.
 - Reducing the high costs and inefficiencies that plague the health system by improving decision-making processes and putting the right data in the right hands at the right time.
 - Decreasing claims denials. Today, 90% of claim denials are avoidable and create extra work on the back end for everyone involved. By combining with Change Healthcare, we aim to create a system that can help reduce this figure.
- The combination will help us to substantially reduce the estimated \$267 billion the U.S. health care industry wastes annually on simply ensuring that health care providers submit valid and properly documented claims and that insurers pay the correct amount for the services provided.
- With the distinct and complementary capabilities and skills of Change Healthcare, Optum will advance anew and more modern foundation to support the next generation health system.

The complaint

■ The complaint

- Filed February 22, 2022
 - After investigating the proposed transaction for more than a year
- Joined by New York and Minnesota
- *Venue*: District of Columbia
- *Relief*: Permanent injunction blocking the transaction

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA
U.S. Department of Justice
Antitrust Division
450 Fifth Street, NW, Suite 4100
Washington, DC 20530,

STATE OF MINNESOTA
445 Minnesota Street, Suite 1400
St. Paul, Minnesota 55101-2131,

and

STATE OF NEW YORK
28 Liberty Street
New York, NY 10005,

Plaintiffs,

v.

UNITEDHEALTH GROUP INCORPORATED
9900 Bren Road East
Minnetonka, MN 55343,

and

CHANGE HEALTHCARE INC.
3055 Lebanon Pike
Nashville, TN 37214,

Defendants.

COMPLAINT

UnitedHealth Group (United), which owns the largest health insurer in the United States, proposes to acquire Change Healthcare (Change), the leading source of key technologies that

Claims

1. Horizontal

- Tend to create a monopoly in the sale of first-pass claims editing solutions in the United States by uniting Optum's Claims Edit System with Change's ClaimsXten



2. Vertical 1—Anticompetitive information conduit

- UHG's control over Change's EDI clearinghouse—a key input for UHG competitors—would give UHG the ability and incentive to use rivals' CSI for its own benefit
- In turn, would lessen competition in the markets for national accounts and large group commercial health insurance

3. Vertical 2—Input foreclosure/RRC

- UHG's control over Change's EDI clearinghouse would give UHG the ability and incentive to withhold innovations and raise rivals' costs in the markets for national accounts and large group health insurance

The trial

■ Judge Carl J. Nichols

- ❑ Former partner, Boies, Schiller & Flexner LLP
- ❑ Nominated by President Donald Trump
- ❑ Sworn in: June 25, 2019

■ Trial

- ❑ Parties stipulated to a TRO—proceeded to trial on the merits
 - Court consolidated proceedings under Rule 65(a)(2)
- ❑ Trial began on August 1, 2022 (12 days)—5 months after the complaint was filed
 - Over two dozen fact witnesses
 - Two expert witnesses from each side
 - 1000 exhibits
- ❑ Decision: Permanent injunction denied on Sept. 19, 2022
 - Seven months after complaint filed
- ❑ Deal closed on October 3, 2022
- ❑ DOJ filed its notice of appeal on November 18, 2022
 - Normally, the time to appeal is 30 days after the filing of the final judgment
 - 28 U.S.C. § 2701(b) provides a 60-day period when one of the parties is a U.S. agency



Experts: DOJ

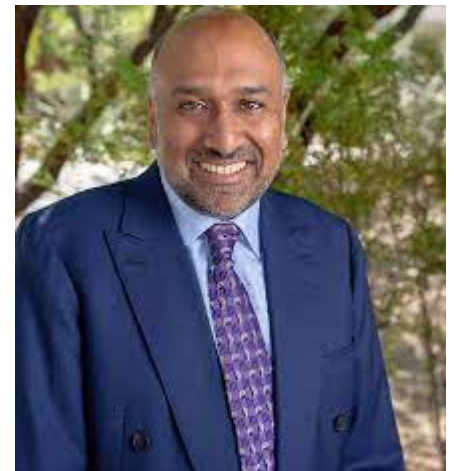
■ Benjamin R. Handel

- ❑ Associate Professor of Economics, Berkeley
- ❑ Consulting Expert, Cornerstone Research
- ❑ Ph.D. Economics, Northwestern University (2010)
- ❑ ASHEcon Medal (top health economist under 40)



■ Gautam Gowrisankaran

- ❑ Professor of Economics, Columbia University
- ❑ Senior Advisor, Cornerstone Research
- ❑ Ph.D., Economics, Yale University (1995)
- ❑ Experienced testifying expert



Experts: Merging parties

■ Catherine E. Tucker

- ❑ Sloan Distinguished Professor of Management Science and Professor of Marketing, MIT Sloan School of Management
- ❑ Academic affiliate with Analysis Group
- ❑ Ph.D., economics, Stanford University (2005)
- ❑ Experienced testifying expert



■ Kevin M. Murphy

- ❑ George J. Stigler Distinguished Service Professor of Economics, University of Chicago Booth School of Business
- ❑ John Bates Clark Medal/MacArthur Fellow
- ❑ Ph.D., economics, University of Chicago (1986)
- ❑ Academic affiliate with Charles River Associates
- ❑ Expert witness in numerous antitrust cases

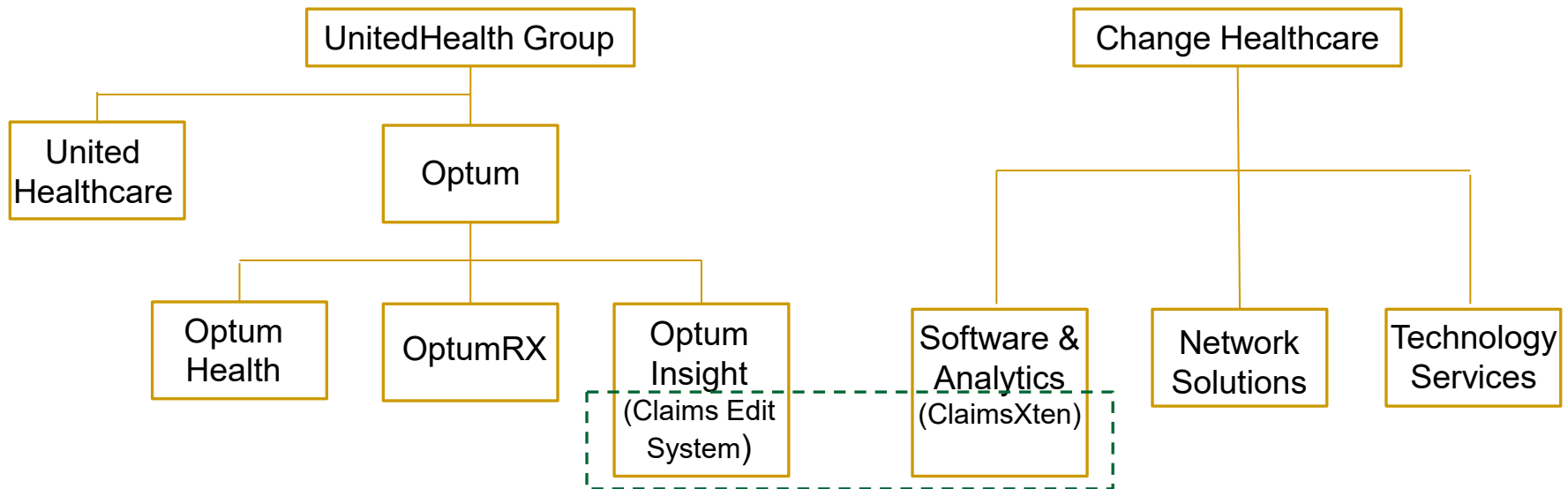


Horizontal overlap in first-pass claims editing

■ The gravamen of the complaint

- ❑ Relevant market: First-pass claims editing solutions in the United States
- ❑ Merger to monopoly
 - Change's ClaimsXten (70%) + Optum's Claims Edit System (25%)
 - Delta: 3577
 - Postmerger HHI: 8831
- ❑ Unilateral effects: Eliminate “intense competition” between the two systems

Merging parties
do not dispute



Horizontal overlap in first-pass claims editing

- The merging parties' response:
Litigate the fix
 - On April 22, 2022, UHG agreed to sell Change's ClaimsXten business to TPG Capital for \$2.2 billion
 - Includes all of Change's four claims editing products, which comprise Change's entire primary and secondary claims editing businesses
 - Divestiture contingent on the closing of the UHG/Change transaction and would take place immediately after that closing

CLAIMSXTEN

Horizontal overlap in first-pass claims editing

- A preliminary question: The burden of proof
 - DOJ's position
 - Once the DOJ has proved a prima facie case against the transaction as originally structured, the burden shift to the merging parties to show that the divestiture “will replace the competitive intensity lost as a result of the acquisition”
 - At times suggests that the merging parties bear the burden of persuasion
 - Merging parties' position
 - Since UHG will never acquire ClaimsXten, the government must prove its prima facie case against the restructured transaction, not the original transaction
 - In any event, the DOJ bears the ultimate burden of persuasion under Step 3 of *Baker Hughes*

Horizontal overlap in first-pass claims editing

- A preliminary question: The burden of proof
 - Court
 - DOJ's position does find some support in D.C. case law
 - BUT contradicts the language of Section 7 and *Baker Hughes*
 - Section 7 requires that the transaction “*substantially* . . . lessen competition,” which is different hat the burden the DOJ urges, which would require the merging parties to show that the fix completely replaces the competition lost as a result of the transaction
 - Step 3 of *Baker Hughes* places the ultimate burden of persuasion on the plaintiff
 - The DOJ's version would permit the government to prove its case using the *PNB* presumption and evidence about a transaction that will never happen if the merging parties fail to meet their burden in Step 2 (what it is)
 - The DOJ would never have to show that the restructured transaction was anticompetitive
 - Although the merging parties' position is the better one, the same result obtains in this case under the DOJ's proposed standard

So the court proceeded to analyze the transaction under the DOJ's proposed standard

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

1. The DOJ's prima facie case on the original transaction

- *Relevant market*: The sale of first-pass claims editing solutions in the United States
- Market shares and participants
 - Change's ClaimsXten: 70%
 - Optum's Claims Edit System: 25%
- The *PNB* presumption—Easily triggered
 - Combined share: 95%
 - Delta: 3577; postmerger HHI: 8831
- Explicit theory of anticompetitive harm: Unilateral effects

Parties do not contest

Courts finds that the DOJ has satisfied made out its prima facie case

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

2. Assessing the “fix”: Five factors—
 - a. Likelihood of divestiture: “Virtual certainty”
 - b. Experience of TPG (the divestiture buyer)
 - c. Scope of divestiture
 - d. Independence of TPG
 - e. Adequacy of the purchase price

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

2. Assessing the “fix”: Five factors—

a. Likelihood of divestiture: “Virtual certainty”

- The parties have a definitive purchase and sell agreement
- All conditions precedent have been satisfied, except for those to be satisfied at closing or by the resolution of this lawsuit
- The DOJ does not contest

b. Experience of TPG (the divestiture buyer)

- One of the world's leading PE firms, with over \$100 in assets under management
- Investment strategy: “We make money from growing the businesses that we invest in”
- Has significant experience and success with “carve-out” investments
- Has significant experience in the healthcare industry
 - Has deployed over \$24 billion in total equity in the healthcare space
 - Holds healthcare businesses on average for eight years before exiting
- Intends to invest substantially in the ClaimsXten business
 - Change 2022 budget for ClaimsXten R&D: \$14 million
 - TPG plans to increase this to \$17 million in 2023, \$26 million in 2024, \$28 million in 2025, and \$30 million in 2026
- No reason to believe that TPG will not be an adequate divestiture buyer because it is a PE firm

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

2. Assessing the “fix”: Five factors (con’t)—

c. Scope of divestiture

- Credits TPG: ClaimsXten is a “a highly separable asset” capable of succeeding on its own was based on extensive due diligence, including conversations with ClaimsXten customers who explained that the product “was sold very independently to the market”
- ClaimsXten was sold as a standalone product before Change acquired it in 2017
- Will include a large team of individuals with extensive experience managing ClaimsXten (including the person who will be CEO of ClaimsXten)
- 375 people will transfer, including—
 - 70-member clinical content team
 - 60-person software and engineering team
 - 200-person customer-success team

d. Independence of TPG

- Independent buyer/independent competitor
- Testimony that TPG will compete vigorously with UHG in first-pass claims editing solutions
 - No evidence to the contrary

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

2. Assessing the “fix”: Five factors (con’t)—

e. Adequacy of the purchase price

- To ensure that the divestiture buyer has enough “skin in the game” to provide it with a sufficient incentive to survive in the business and compete vigorously
- No evidence to doubt adequacy of the purchase price (\$2.2 billion)

Horizontal overlap in first-pass claims editing

Court: Using the DOJ's proposed standard of proof

3. Court's conclusion

- *Under the DOJ's proposed standard:* Rebuts DOJ's prima facie case

Indeed, the trial evidence shows—and the Court concludes—that competition in the post-divestiture market for first-pass claims editing will match, and perhaps even exceed, its current levels.

- *Under the proper standard:* Evidence prevents DOJ from making a prima facie case
- *Order:* UHG ordered to divest ClaimsXten as proposed
 - *Note:* A court order of divestiture exempts the transaction from the reporting and waiting period requirements of the HSR Act¹
 - *Query:* If the court rejected the DOJ's claim and found for the defendants, what is the court's jurisdiction to issue the divestiture order?
 - One possibility: The All Writs Act:

The Supreme Court and all courts established by Act of Congress may issue all writs necessary or appropriate in aid of their respective jurisdictions and agreeable to the usages and principles of law.²

¹ HSR Rule 802.70, 16 C.F.R. 802.70.

² 28 U.S.C. § 1651(a).

Vertical anticompetitive information conduit

■ DOJ's theory: Four steps—

1. The acquisition will give Optum access to rivals' claims CSI data
2. Optum will have the incentive to share competitive insights from the CSI data with UHC
3. Knowing this, UHC's rivals will innovate less because of the fear that UHC will free ride off their claims-related innovations
4. Less innovation → harm to competition in the relevant insurance markets

Note: This theory depends on how rivals would react to the possibility that UHG access and use their information to their competitive disadvantage

NOT how in fact UHG postmerger would use their CSI to competitively disadvantage them

Vertical anticompetitive information conduit

■ The evidence

□ On sharing data

■ Evidence not to share or use rival CSI

- Optum currently has access to rival CSI through its Claims Edit System, which it does share with UHC
 - Contrary to UHG's its entire business strategy and corporate culture
 - Would intentionally violate or repeal longstanding firewall policies
 - Would flout existing contractual commitments
 - Would sacrifice significant financial and reputational interests

■ Rival insurance companies testified that—

- Optum's has strong incentives to comply with the firewalls and protect customers' data, and
- They trust Optum not to share their data with UHC after the merger

■ The Government offered no conflicting testimony at trial

□ On innovation by rival health insurance companies

- DOJ failed to adduce evidence that any UHC rival would innovate less out of fear that UHC would access and use their CSI
 - All payer witnesses testified to the contrary

Vertical anticompetitive information conduit

- Court's conclusion: The DOJ failed to make out a prima facie case

1. Finding:

[T]he evidence at trial established, and the Court finds, that United will have strong legal, reputational, and financial incentives to protect rival payers' CSI after the proposed merger.¹

2. The DOJ failed to present evidence to show—

- How much incremental rival CSI would UHG obtain as a result of the acquisition that it would not have through its Claim Edit System, *and*
- That this incremental information would reverse UHG's premerger profit-maximizing incentive to protect its rivals' CSI and not share it with UHC

3. The DOJ's allegation that rivals would innovate less was—

- Based on the speculation of its expert witnesses without supporting real-world evidence
- Contrary to the testimony of all payers at trial

¹ United States v. UnitedHealth Grp. Inc., No. 1:22-CV-0481 (CJN), 2022 WL 4365867, at *23 (D.D.C. Sept. 21, 2022).

Vertical anticompetitive information conduit

- Court's conclusion: The DOJ failed to make out a prima facie case
 - 3. Even if payers would innovate less, the DOJ failed to show that the reduced pace of innovation would *substantially* lessen competition:

The Government rests on the axiomatic truth that payers who are innovating less are also competing less. But it made no attempt to show that the lessening of innovation and competition would be substantial. In fact, the Government's own expert admitted that rival insurers would still innovate after the proposed merger. But establishing that the proposed merger would "lessen innovation" (and thus competition) and that insurers would have "less of an incentive to innovate" (and thus compete) does not establish that the proposed merger would *substantially* lessen competition. The Government failed to offer evidence demonstrating that that standard is met here. But the Court need not rest its holding on this point, as the Government failed to establish other steps in its theory.¹

Although dictum, this focus of a “substantial” lessening of competition is a significant precedent

¹ United States v. UnitedHealth Grp. Inc., No. 1:22-CV-0481 (CJN), 2022 WL 4365867, at *6 (D.D.C. Sept. 21, 2022).

Vertical anticompetitive information conduit

- Conclusion: The DOJ failed to make out a prima facie case
 - 4. Central weakness in the government's case
 - The DOJ presented opinion evidence by economic experts without any real-world support
 - The merging parties presented contrary evidence by knowledgeable and experienced party and rival representatives who worked in the business

The evidence at trial highlighted weaknesses in each of these steps. But the central problem with this vertical claim is that it rests on speculation rather than real-world evidence that events are likely to unfold as the Government predicts. Governing law requires the Court to "mak[e] a prediction about the future," and that prediction must be informed by "record evidence" and a "fact-specific showing" as to the proposed merger's likely effect on competition. Under this standard, "antitrust theory and speculation cannot trump facts."¹

¹ United States v. UnitedHealth Grp. Inc., No. 1:22-CV-0481 (CJN), 2022 WL 4365867, at *6 (D.D.C. Sept. 21, 2022) (quoting United States v. AT&T, Inc., 310 F. Supp. 3d 161, 190 (D.D.C. 2018) (internal citations omitted), *aff'd*, 916 F.3d 1029 (D.C. Cir. 2019)).

Vertical foreclosure

■ DOJ's theory: Three steps—

1. Optum and Change are the only two firms developing an “integrated platform” for payers
2. If UHG acquires Change, it would control the development of the only integrated platform
3. UHG would then foreclose access by UHC rivals by withholding or delaying sales of the integrated platform

■ The evidence

- The “integrated platforms” in question are only concepts, not products
- Optum has never withheld a product from UHC's rivals
 - Optum currently markets all its payment integrity products to UHC's biggest rivals
- Optum has never sold one version of a product to UHC and a degraded version to other customers
 - Although Optum has piloted some products with UHG to test them before making them commercially available

Vertical foreclosure

■ DOJ's expert testimony

- Dr. Gowrisankaran's "vertical math" shows that UHG could increase its profits by foregoing sales of its integrated platform (once developed) to rivals
 - The profit losses from not selling the platform to UHC rivals would be more than offset by—
 - The profits gains from insurance sales that would shift from UHC's rivals to UHC's (presumably) better priced commercial insurance products
- BUT

Dr. Gowrisankaran's testimony, however, is at odds with the unrebutted testimony of various United executives, who stated consistently their view that it is not in United's interests for Optum to abandon its multi-payer strategy. . . . The Court concludes that this testimony [by Andrew Witty, the CEO of UHG]—and the similar testimony of a number of other United executives—is far more probative of post-merger behavior than Dr. Gowrisankaran's independent weighing of costs and benefits.¹

The DOJ failed to make out a prima facie case

¹ United States v. UnitedHealth Grp. Inc., No. 1:22-CV-0481 (CJN), 2022 WL 4365867, at *27 (D.D.C. Sept. 21, 2022).

Current status

- Final Judgment entered on September 19, 2022
 - Denying DOJ's request for a blocking injunction
 - Ordering UHG to divest ClaimsXten to TPG Capital as proposed
 - Entering final judgment for the defendants
- Parties closed the transaction on October 3, 2022
 - The DOJ did not request a stay pending appeal
- The DOJ filed its notice of appeal on November 18, 2022
 - The last day permitted by statute for taking an appeal in a case when a federal government agency is a party

Class 26 slides

Unit 18: Penguin/Simon & Schuster

Professor Dale Collins
Merger Antitrust Law
Georgetown University Law Center

December 1, 2022



Penguin
Random
House



Simon &
Schuster

What was the gravamen of the complaint?

- The acquisition was reasonably probable to substantially lessen competition in the acquisition of publishing rights to anticipated best-selling books
 - “Anticipated best-selling books” identified as books with advances over \$250K

What was the result of the case?

- The DOJ won
- Simon & Schuster unilaterally terminated the merger agreement on the drop-dead date

Why did the winning party win?

Government wins

H&R Block/ TaxACT	Step 2
Sysco/ U.S. Foods	Step 2
Staples/ Office Depot	Step 2
Penguin/ Simon & Schuster	Step 2

Merging parties win

U.S. Sugar/ Imperial Sugar	Step 1
AT&T/ Time Warner	Step 1
UnitedHealth/ Change	Step 1

The complaint

- The complaint
 - Filed November 2, 2021
 - After investigating the proposed transaction for a little less than a year
 - **Venue:** District of Columbia
 - **Relief:** Permanent injunction blocking the transaction

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA
U.S. Department of Justice
Antitrust Division
450 Fifth Street, NW, Suite 4000
Washington, DC 20530,

Plaintiff,

v.

BERTELSMANN SE & CO. KGaA
Carl-Bertelsmann-Strasse 270
33311 Gütersloh, Germany,

PENGUIN RANDOM HOUSE, LLC
1745 Broadway
New York, NY 10019,

VIACOMCBS, INC.
1515 Broadway
New York, NY 10036,
and

SIMON & SCHUSTER, INC.
1230 Avenue of the Americas
New York, NY 10020

Defendants.

COMPLAINT

The United States of America brings this civil action to stop Penguin Random House, LLC—the world’s largest book publisher—from buying its publishing rival, Simon & Schuster, Inc. If Defendants’ proposed merger is allowed to proceed, Penguin Random

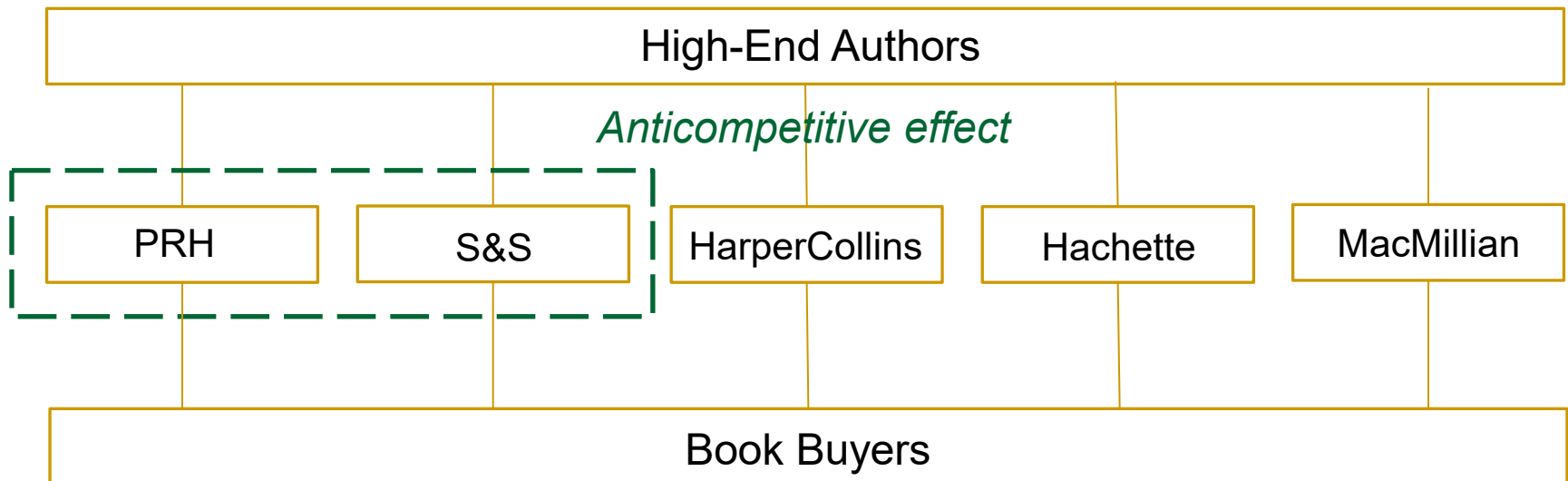
Claim

■ Horizontal

- Transaction may substantially lessen competition in the acquisition of publishing rights to anticipated best-selling books
 - Defined to be books with advances over \$250K

■ The anticompetitive effect is located in an upstream (buyer) market

- No claim of any anticompetitive in the downstream (seller) market



The trial

■ Judge Florence Y. Pan

- ❑ Former associate judge of the Superior Court of the District of Columbia
- ❑ Nominated by President Joe Biden
- ❑ Sworn in: September 23, 2021
- ❑ Elevated to the D.C. Circuit: September 26, 2022



■ Trial

- ❑ Parties stipulated to a TRO—proceeded to trial on the merits
 - Court consolidated proceedings under Rule 65(a)(2)
- ❑ Trial began on August 1, 2022 (12 days)—8 months after the complaint was filed
 - Testimony from authors, publishers, literary agents, and industry executives
 - One expert witnesses from each side
 - 230 exhibits
- ❑ Decision: Permanent injunction granted on October 31, 2022
 - Twelve months after the complaint was filed
- ❑ Deal abandoned by S&S on November 21, 2022 (the drop-dead date)
 - Bertelsmann pays \$200 million break-up fee



Experts:

■ DOJ: Dr. Nicholas Hill

- Partner at Bates-White
- Ph.D in economics, Johns Hopkins University
- Joined Bates-White in 2017
- Prior 12 years as a government antitrust economist
 - 2014-2017: ATD Assistant section chief
 - 2013-2014: FTC staff economist
 - 2006-2013: ATD staff economist
- Testified in several antitrust cases



■ Merging parties: Dr. Edward A. (“Ted”) Snyder

- Professor of Economics and Management, SOM, Yale
 - Dean (2011 - 2019)
- Former Dean, Booth School of Business, University of Chicago
- Ph.D in economics, University of Chicago
- Academic affiliate, Analysis Group
- Testified in multiple antitrust cases
 - But this may be his first merger antitrust case

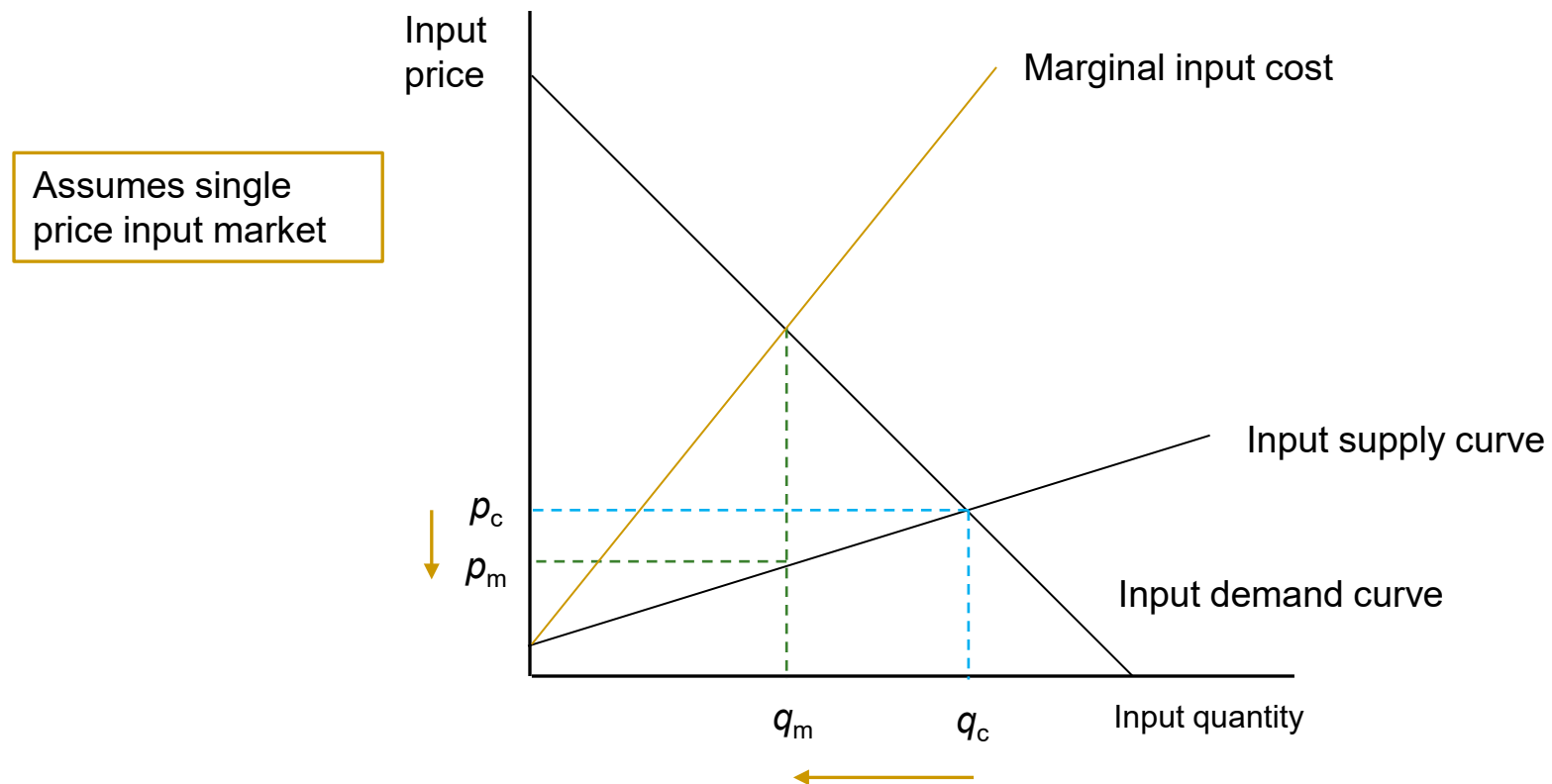


Court: Legal standard

- Recognized that competition could be harmed in input markets as well as output markets
- Treated harm to sellers in input markets as the same as harm to buyers in output markets
- Did NOT consider the effect—or lack of effect—on downstream consumers from harm in upstream markets
 - This was a major theme for the merging parties
 - The court ignored it in its opinion

Monopsony

- The monopsonist reduces input demand to create a demand scarcity
- Inframarginal suppliers bid down the input price to clear the market



Monopsony

- Consider three scenarios as a result of a monopsony power-increasing merger

Scenario	Inputs	Market Output	Consumer Effect
Classical monopsony	Decline	Declines (merged firm large enough to affect market output)	Consumer harm

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Local input market; Larger competitive output market	Decline	Remains constant (merged firm too small to affect market output)	Neutral
Local input market; Larger competitive output market	Decline	Increases (merged firm passes input cost savings to consumers in whole or in part by reducing output price)	Consumer benefit

What is the antitrust outcome in each case for the merger?

In what scenario did the merging place attempt to place the Penguin/S&S merger?

The District Court's Analysis

What was the relevant product market?

- Court: Adopts DOJ definition
 - The acquisition of publishing rights to anticipated best-selling books
 - “Anticipated best-selling books” identified as books with advances over \$250K
 - Looks to—
 - *Brown Shoe* factors
 - Hypothetical monopolist test

What was the relevant product market?

■ *Brown Shoe* factors

□ *Court*: Looks at the characteristics of the products

- Distinct prices (advances, higher royalty rates, customized terms)
- Authors are “distinct sellers” with distinct demands for distribution, marketing support, and editorial assistance

Really more indicative of “target suppliers” in the broader market of all book rights

□ *Query*: Why look at these characteristics?

- In output markets, it is to test substitutability by customers of products inside the candidate market
- What about in input markets?
 - Should be to test substitutability by input suppliers of input purchasers
 - Did the court consider that here or did the court just apply the *Brown Shoe* factors mechanically?

□ Defendants: Argue that the \$250K threshold is arbitrary

- Δ s: Either set—
 - Too high (\$50K when Big Five begin to dominate acquisitions of book rights), or
 - Too low (\$1 million for celebrity authors)
- Court: Rejected
 - *Query*: What do you think the judge have in mind when she repeatedly spoke (repeatedly) of the \$250K threshold as an “analytical tool”? What do you think of this?

What was the relevant product market?

■ Hypothetical monopolist test

- Idea: To test supply-side response—

If a hypothetical monopsonist of purchasers in the candidate market attempted to suppress input prices, would enough suppliers be to turn to alternative purchasers to make the hypothetical monopsonist's input price decrease unprofitable?

- Defendants: Do not dispute that the candidate market passes the HMT
- Query: Was the implementation of the HMT in this class correct?
 - Setup
 - Initial candidate market: All publishers
 - The alternatives are self-publishing and new entry
 - Is this the right starting point?
 - Where all publishing houses market participants in the candidate market?
 - Would the result differ if the HMT was conducted correctly?

What was the relevant geographic market?

- Global market for the acquisition of U.S. publishing rights
 - Actually, the qualification of “U.S.” publishing rights belongs in the relevant product market
- No dispute

Does the *PNB* presumption apply?

- Who were the market participants?
 - Hill used 60 firms
- What was the measure of market share?
 - Hill used the share of titles acquired (of books with advances over \$250K)
 - Was this the right measure?
 - Two alternatives—
 - Aggregate advances paid
 - $1/n$, where n is the number of purchasers in the market (since this is a bidding market

Does the *PNB* presumption apply?

- What were the concentration statistics (WDC calculations)?

	Share	HHI
PRH	37%	1369
HarperCollins	24%	576
S&S	12%	144
Hachette	10%	100
MacMillian	9%	81
Others	8%	
	100%	2270

		Court
Combined	49%	49%
Premerger HHI		2270
Delta		888
Postmerger HHI		3158
		2220
		891
		3111

Differences probably result from rounding errors

Defendants did not dispute calculations

- Presumptively anticompetitive under the Merger Guidelines
- Supported by *PNB* (combined firm over 30%; 4FCR over 78%)
- Support by modern judicial precedent
 - Hospital Corp. of Am. v. FTC, 807 F.2d 1381, 1384 (7th Cir. 1986) (combined 26%; 4CFR 91%)
 - FTC v. H.J. Heinz Co., 246 F.3d 708, 715-17 (D.C. Cir. 2001) (combined 32.8%)

Does the *PNB* presumption apply?

■ Stability of market shares

- Market shares of Big 5 stable over past three years
- Court:
 - “The Agencies give more weight to market concentration when market shares have been stable over time. . . .” Merger Guidelines § 5.3
 - This “reinforces the presumption of anticompetitive effects based on market concentration.”

■ Other evidence

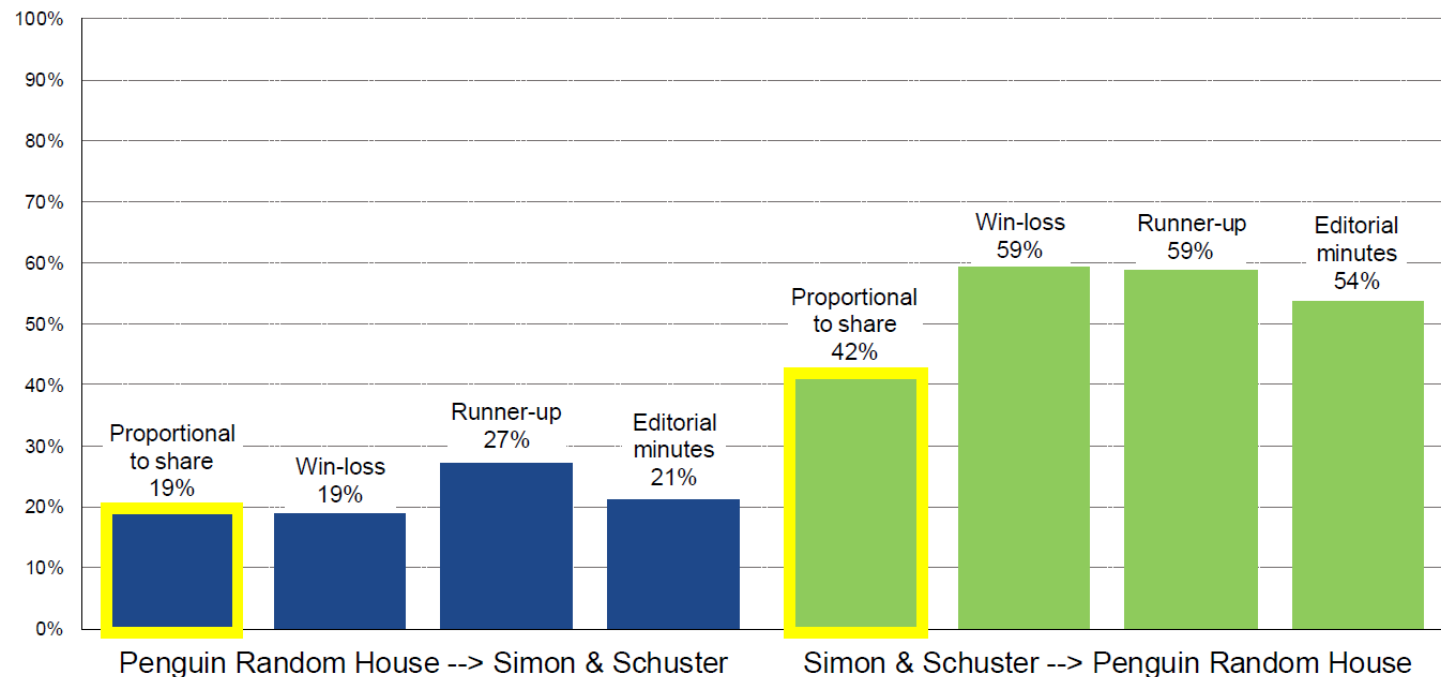
- Unilateral effects
- Coordinated effects

What was the evidence of unilateral effects?

- Diversion ratio: Court's definition—
 - “If one merging party lowered advance levels, what percentage of its authors would ‘divert’ their business to the other merging party, as opposed to diverting to other firms in the industry?”
 - WDC: Not the usual definition of diversion ratio (which would look to the percentage of lost authors that divert)
 - But very likely the court may have misunderstood the concept or just misspoken
- Hill's four methods of calculating diversion ratios
 1. Diversion proportional to market shares, which is the largest data set (relative market shares)
 2. Win/loss data, which examines which publishers the merging parties lose to the most often
 3. Runner-up data, which shows how often the other party was the "runner-up" when one of the merging parties won an acquisition
 4. Minutes from the parties' editorial meetings, which provide a window into how frequently one merging party bid on a book and lost to the other party

What was the evidence of unilateral effects?

Estimates of diversion using four methodologies



PX 0970.

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What was the evidence of unilateral effects?

■ Other evidence

- Snyder's diversion ratios (Δs)—Was this helpful?
 - PRH → S&S: 20%
 - S&S → PRH: 27%
- Industry testimony
 - Expect advances would go down with competition lost between PRH and S&S
- “Top two” competition between PRH and S&S
 - Hill: About 12% of the time (based on relative market share)

Highest Bidder		Second Highest Bidder		%total bids
Market share		Relative market share		
PRN	37%	S&S	19.0%	7%
S&S	12%	PRH	42.0%	5%
				12%

- Snyder: 6-7%
- DOJ evidence: 27 summaries of head-to-head competition over last 3.5 years in which competition drove up advance amounts

What was the evidence of unilateral effects?

■ Other evidence

□ Number of bidders

- Court: As the number of bidder increase, the likelihood of a higher winning bid go up (and conversely)—with support expert and industry testimony
- WDC: This is an order statistic phenomenon
 - *The idea*: For example, if S&S is the highest bidder 12% of the time, then if S&S was eliminated as an independent bidder those bids that S&S won would have gone to the second highest bidder as a lower advance level
 - The court appears to have been very impressed with this argument
 - BUT assumes no adjustment by the other firms in the market

□ Acquisition will reduce PRH's incentive to bid aggressively to gain market share

- Dohle (PRH CEO):
Q: "After this merger, Penguin Random House will not have as strong a need to grow its share?"
Dohle: "Yes."

□ Hill's quantification model

- Advances to PRH authors would decrease about 4% (\$44,000)
Advances to S&S authors would decrease by 11.5% (or \$105,000)
- Used "second-score auction model" (what we called "second price auction model in Sysco)

What was the evidence of coordinated effects?

■ Premerger susceptibility

□ History of collusion

- Five of the then-Big Six colluded in attempting to raise ebook prices on Amazon
 - This was the Amazon eBook case
 - Random House did not participate

□ Big Five are tacitly coordinating now in acquiring books: Three examples—

- *Advances*: Used to be paid in two installments, then publishers uniformly moved to three installments, and then to four installments
- *Audiobooks*: Rights to audiobooks were originally sold separately from book publishing rights; now book publishers uniformly refuse to bid for book rights without audiobook rights
- *eBooks*: During the early years of ebooks, publishers uniformly shifted royalty rates from 50% to 25% (reducing author's compensation)

■ Postmerger increase in likelihood and effectiveness

- Merger reduces the number of major publishers from five to four
- Creates a dominant firm controlling 49% and top two firms controlling 74%

What was the defendants' rebuttal

■ Six lines of rebuttal

1. Existing competition is sufficient to preserve competition
 - Other Big Five publishers
 - Non-Big Five publishers
 - Internal competition among imprints
 - PRH's promise to allow imprints to compete not contractually enforceable
 - Self-publishing
2. Ease of entry and expansion
 - Substantial barriers to entry and expansion
3. Power of literary agents to constrain anticompetitive behavior by publishers
 - Their power remains the same but with one less major player to play off the others
4. Efficiencies from the merger will offset anticompetitive effects
 - Not considered—Testimony excluded for failing to verify
5. Lack of negative effects from the last major merger in the publishing industry
 - Evidence on both sides—Inconclusive
6. The parties' interest in finding the “best home” for S&S
 - Speculative as to the effect if S&S was acquired by a private equity firm
 - Parties' concerns not cognizable as a defense in any event
 - Only focus is the effect of this acquisition
 - WDC: Is this always right?

