



PRESUMPTIONS IN VERTICAL MERGERS: The Role of Evidence

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Pros and Cons 2020

Stockholm, Sweden November 6, 2020

BASED ON JOINT WORK WITH FRANCINE LAFONTAINE



The background is a light gray gradient with a faint, circular, textured pattern in the center. Several realistic water droplets of various sizes are scattered around the edges, with highlights and shadows that give them a three-dimensional appearance.

BACKGROUND

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- HISTORICALLY, VERTICAL MERGERS WERE PRESUMED EFFICIENT
- THEY INVOLVE COMPLEMENTARY PRODUCTS
- HORIZONTAL MERGERS INVOLVE SUBSTITUTES
- THAT PERCEPTION HAS CHANGED
 - IN LIGHT OF THEORETICAL MODELS OF ENTRY DETERRENCE, FORECLOSURE, RAISING RIVALS COSTS
 - HARM IS POSSIBLE BUT NOT INEVITABLE
- VERTICAL MERGER GUIDELINES REFLECT CHANGES IN THAT PERCEPTION

BACKGROUND (CONT.)

- VERTICAL MERGER GUIDELINES RARELY INVOLVE PRESUMPTIONS
- INSTEAD THEY CONTAIN LIKELIHOODS
- HISTORY OF SAFE HARBORS IN VM GUIDELINES (LIKELIHOODS)
 - 1984: US Nonhorizontal Merger Guideline thresholds:
 - $HHI < 1800$ market shares $< 5\%$
 - 2008: EU Nonhorizontal Merger Guideline thresholds:
 - $HHI < 2000$ and market shares $< 30\%$
 - List circumstances that lead to exceptions (cross shareholding, likely expansion, disruptive firm)
 - 2020: US Vertical Merger Guidelines:
 - No thresholds

BACKGROUND (CONT.)

- HAS INTEREST IN PRESUMPTIONS AND LIKELIHOODS WANED?
- NOT NECESSARILY, INTEREST IN STRUCTURAL TYPE PRESUMPTIONS HAS LESSENERD
- A RECENT ARTICLE (BAKER ET. AL. 2020) ADVOCATES SEVEN VM PRESUMPTIONS
 - ON INPUT AND CUSTOMER FORECLOSURE, DISRUPTIVE BUYERS AND SELLERS, ELIMINATION OF POTENTIAL ENTRY, EVASION OF REGULATION, AND DOMINANT PLATFORMS
- MY TALK WILL DISCUSS CONDITIONS THAT I THINK THAT ANY PRESUMPTION SHOULD SATISFY

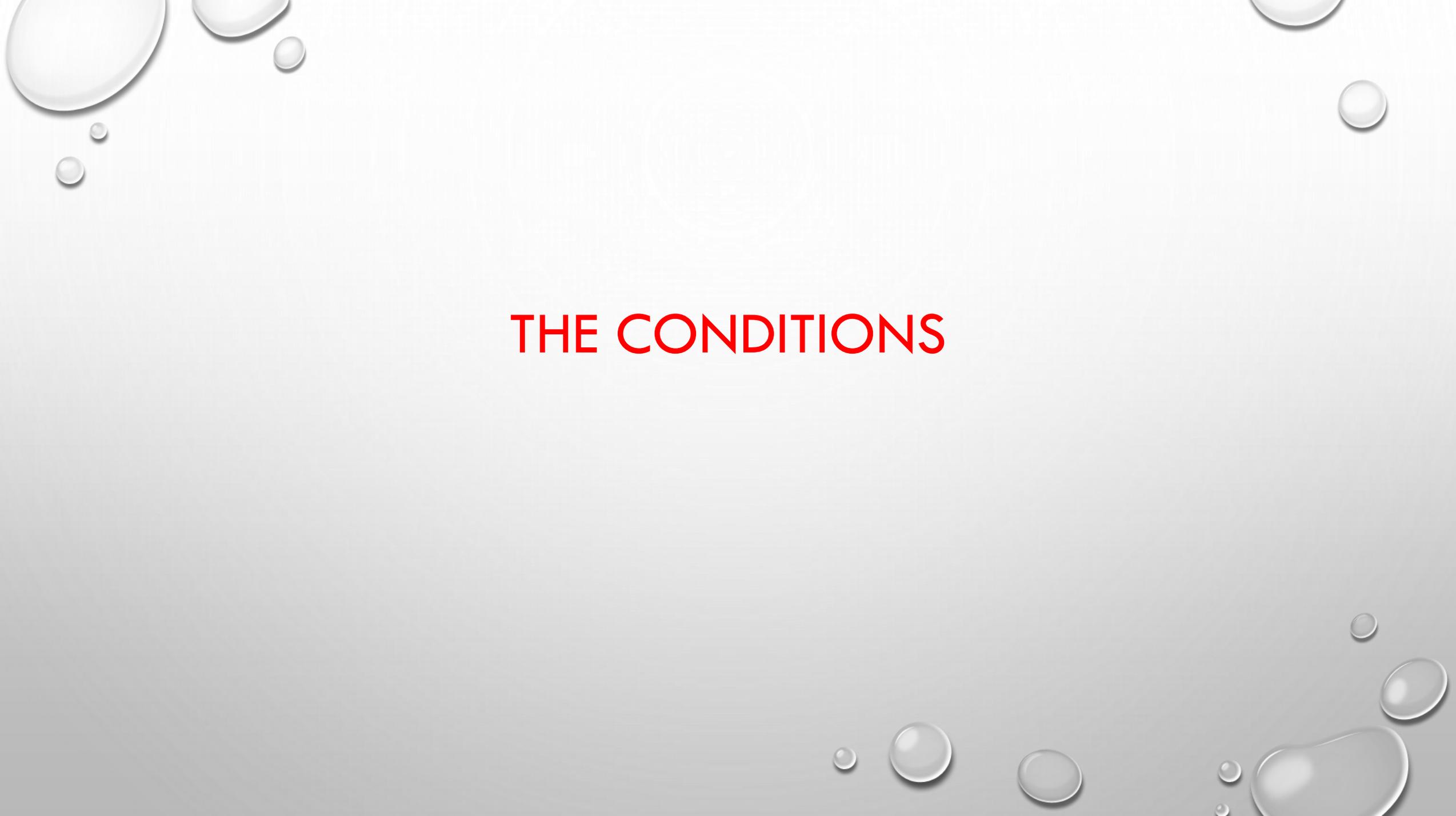
PRESUMPTIONS IN ANTITRUST

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- A PRESUMPTION SAYS THAT IF WE OBSERVE A WE CAN INFER B
- PRESUMPTIONS ARE IMPORTANT
 - CLARIFY WHAT IS LIKELY TO HAPPEN – GUIDANCE TO PARTICIPANTS
 - CAN CHANGE THE BURDEN OF PROOF
 - EXAMPLE: THE STRUCTURAL PRESUMPTION IN US HORIZONTAL MERGERS ($HHI > 2500$, $\Delta HHI > 200$)
 - IS REBUTTABLE
 - SHIFTS THE BURDEN OF PROOF TO THE DEFENDANTS
 - *“The height and allocation of these burdens is a critical and often outcome determinative of the judicial process.”*
Gavil (2008)

PRESUMPTIONS IN ANTITRUST (CONT.)

- WE SHOULD THEREFORE FEEL CONFIDENT THAT A DOES INDEED LEAD TO B
- THE OECD BACKGROUND PAPER (2017) STATES THAT PRESUMPTIONS SHOULD BE BASED ON
 - EXPERIENCE
 - ECONOMIC THEORY
 - COMMON SENSE
- THE PROBLEM IS THAT THERE ARE USUALLY BOTH EFFICIENCIES AND COMPETITIVE HARM
 - IN ADDITION TO THE USUAL PRODUCTION/COORDINATION EFFICIENCIES, THERE IS THE PRICING EXTERNALITY (EDM)
- I PROPOSE TWO CONDITIONS THAT PRESUMPTIONS SHOULD SATISFY



THE CONDITIONS

CONDITION 1:

1: THERE SHOULD BE A BODY OF EMPIRICAL EVIDENCE THAT SHOWS THAT THE OBSERVED CIRCUMSTANCES (A) DO INDEED LEAD TO THE ANTICOMPETITIVE OUTCOME (B)

- THIS IS THE MOST IMPORTANT CONDITION AND I DEVOTE THE MOST ATTENTION TO IT
- WILL DISCUSS THE CONDITION IN THE CONTEXT OF VERTICAL MERGERS

CONDITION 1:

EVIDENCE THAT *IS NOT* RELEVANT FOR PRESUMPTIONS

1: SHOULDN'T PERTAIN TO THE SORT OF INDUSTRY THAT NORMALLY DOESN'T RAISE CONCERNS

- SALOP AND CULLEY (2018) DOCUMENT 25 YEARS OF US VERTICAL MERGER ACTIONS
- INDUSTRIES THAT RAISE CONCERNS ARE OFTEN CHARACTERIZED BY
 - HIGH CONCENTRATION
 - ECONOMIES OF SCALE OR SCOPE
 - TWO-SIDED MARKETS
 - NETWORK EFFECTS
 - MULTIPRODUCT FIRMS
- OFTEN MEDIA, TECHNOLOGY, TELECOM, ENERGY, OR HEALTH MARKETS

CONDITION 1:

EVIDENCE THAT *IS NOT* RELEVANT FOR PRESUMPTIONS (CONT.)

2: EX ANTE MERGER SIMULATIONS ARE NOT RELEVANT EVIDENCE

- THEY ARE USEFUL PREDICTIVE TOOLS, BUT
- THEY ARE:
 - TOO SIMPLE
 - TOO SENSITIVE TO ASSUMPTIONS
 - OFTEN (IN THE HORIZONTAL CONTEXT) YIELD INACCURATE PREDICTIONS
 - PETERS (2006); SLADE (2009); WEINBERG AND HOSKEN (2013); BJORNERSYEDT & VERBOVEN (2016)
- EXAMPLE: AT&T/TIME WARNER
 - DOJ CLAIMED THAT THERE WERE COSTS (FORECLOSURE) AND BENEFITS (EDM) AND THAT COSTS > BENEFITS
 - DEFENDANTS CLAIMED THAT SMALL CHANGES TO THE MODEL YIELDED THE OPPOSITE CONCLUSION

CONDITION 1:

EVIDENCE THAT *IS NOT* RELEVANT FOR PRESUMPTIONS (CONT.)

3: HYPOTHETICAL VERTICAL MERGER SIMULATIONS ARE NOT RELEVANT EVIDENCE

- EXAMPLE: A STRUCTURAL MODEL IS ESTIMATED AND USED TO INVESTIGATE WHAT WOULD HAPPEN IF:
 - TWO FIRMS WERE TO MERGE
 - A PRACTICE WERE BANNED
- CAN BE EXTREMELY VALUABLE RESEARCH
 - CRAWFORD ET. AL. (2018); CUESTA ET. AL. (2020)
- RESULTS ARE USUALLY AMBIGUOUS OR NOT STRONG (STATISTICALLY SIGNIFICANT)
- EVEN WHEN A CONCLUSION IS REACHED, IT CAN OFTEN BE REVERSED UNDER ALTERNATIVE PLAUSIBLE PARAMETER VALUES

CONDITION 1:

EVIDENCE THAT *IS* RELEVANT FOR PRESUMPTIONS

RETROSPECTIVE MERGER ANALYSIS

EX POST STUDIES OF THE CONSEQUENCES OF ACTUAL VERTICAL MERGERS

1: DETAILED RETROSPECTIVE CASE STUDIES OF A SINGLE MERGER

- USE PRE AND POST EVENT (E.G., MERGER CONSUMMATED) DATA
- ASK: WHAT WOULD HAVE HAPPENED ABSENT THE MERGER?
- OFTEN THE INDUSTRY INVOLVES MANY MARKETS, SOME ARE AFFECTED AND SOME ARE NOT
- CAN COMPARE OUTCOMES IN THE TWO SORTS OF MARKETS
- THE OUTCOME OF INTEREST CAN BE PRICE TO DOWNSTREAM CUSTOMERS, COULD BE SOMETHING ELSE
- HIGHLY RESOURCE INTENSIVE

CONDITION 1:

EXAMPLE: RETROSPECTIVE SINGLE MERGER STUDY

- Suzuki (2009)
 - A CABLE TV PROGRAM PROVIDER (TURNER BROADCASTING) MERGED WITH A DISTRIBUTOR (TIME WARNER)
 - THE AFFECTED (TREATED) SET IS ALL TIME WARNER DISTRIBUTORS, DIFFERENT GEOGRAPHIC MARKETS
 - THE UNAFFECTED (CONTROL) SET CONSISTS OF SIMILAR DISTRIBUTORS THAT WERE NOT AFFECTED BY THE MERGER
 - COMPARES SUBSCRIPTION PRICE CHANGES (PRE AND POST MERGER) IN THE TWO SETS OF FIRMS
 - A DIFFERENCE IN DIFFERENCES STUDY
 - FINDS EVIDENCE OF THAT SUBSCRIPTION PRICES FELL
 - SUBSCRIPTION SALES DID NOT
 - LOWER QUALITY -- TIME WARNER SHIFTED THE BASIC BUNDLE TOWARDS ITS OWN CHANNELS

CONDITION 1:

EVIDENCE THAT *IS* RELEVANT FOR PRESUMPTIONS (CONT.)

2: RETROSPECTIVE STUDIES THAT ASSESS MANY MERGERS

- SELECT SET OF MERGERS, USUALLY ONES THAT WERE EXTENSIVELY STUDIED BY AUTHORITIES
 - THAT SATISFY SOME CRITERION
- NEED A COMPARISON SET, FIRMS OR PRODUCTS THAT ARE SIMILAR TO THE MERGED FIRM OR PRODUCTS BUT WERE NOT AFFECTED BY THE MERGER
- CAN COMPARE OUTCOMES (E.G., PRE AND POST PRICE CHANGES) IN THE TWO SETS
- CAN SIMPLY CLASSIFY AS PRICE INCREASED OR NOT – RELATIVE TO COMPARISON SET

CONDITION 1:

EXAMPLE: RETROSPECTIVE MANY MERGER STUDY

- KWOKA (2017)
 - STUDY OF MANY US HORIZONTAL MERGERS THAT SATISFY THE *STRUCTURAL PRESUMPTION*
 - POST MERGER $HHI > 2500$, $\Delta HHI > 200$
 - LOOKS AT POST MERGER PRICE INCREASES: POSITIVE, NEGATIVE, OR ZERO
 - RELATIVE TO SIMILAR NON-MERGING FIRMS
 - FINDS POSITIVE PRICE INCREASES 86% (95%) OF THE TIME
 - STATISTICALLY SIGNIFICANT
 - EVIDENCE IN FAVOR OF STRUCTURAL PRESUMPTION

CONDITION 1:

EXAMPLE: RETROSPECTIVE MANY MERGER STUDY (CONT.)

- ALSO EXAMINES THE *SAFE HARBOR CONDITION*, POST MERGER $HHI < 1500$
 - CONCLUDES THAT THERE IS NO EVIDENCE TO SUPPORT IT. WHY?
 - THERE ARE SO FEW CONTESTED MERGERS IN THIS RANGE
 - THOSE THAT ARE IN THAT RANGE ARE APT TO BE TROUBLESOME FOR OTHER REASON
- TWO MEANINGS OF *NO EVIDENCE THAT A CAUSES B*
 1. A STUDY INVOLVES MANY MERGERS AND SHOWS THAT THERE IS NO RELATIONSHIP BETWEEN A AND B
 2. THE NUMBER OF MERGERS IN THE STUDY IS SMALL AND/OR THE DATA ARE OF POOR QUALITY
 - IMPORTANT FOR VERTICAL MERGERS

CONDITION 1:

EVIDENCE THAT *IS* RELEVANT FOR PRESUMPTIONS (CONT.)

3: STOCK MARKET EVENT STUDIES

- EVALUATE INVESTOR EXPECTATIONS ABOUT CHANGES IN FUTURE PROFIT FLOWS (VALUE CREATION)
- CAN EVALUATE MANY MERGERS
- LESS RELEVANT BECAUSE
 - THEY DEAL WITH PROFITS (ABNORMAL RETURNS) NOT OUTCOMES FOR CONSUMERS
 - EXPECTATIONS ARE OFTEN NOT REALIZED
- MOST RELEVANT INFORMATION CONSISTS OF RETURNS FOR DOWNSTREAM CUSTOMERS

CONDITION 1:

EXAMPLE: STOCK MARKET EVENT STUDY

- Mullin and Mullin (1997):
 - US STEEL'S ACQUISITION OF GREAT NORTHERN RAILROAD ORE PROPERTIES IN 1906
 - LOOKS AT RETURNS OF ACQUIRER, ACQUIRED, DOWNSTREAM RIVALS, AND DOWNSTREAM CUSTOMER FIRMS
 - CUSTOMERS ARE MOST IMPORTANT FROM OUR POINT OF VIEW
 - CONCLUDES THAT THE MERGER WAS EFFICIENT
 - PROMOTED RELATIONSHIP SPECIFIC INVESTMENT
 - CUSTOMERS WERE NOT HARMED

CONDITION 2:

2: THE PROBLEM THAT IS ADDRESSED BY A VM PRESUMPTION SHOULD BE INTRINSICALLY VERTICAL AND NOT BE COVERED BY HORIZONTAL MERGER POLICY

- VERTICAL MERGERS INVOLVE TWO MARKETS
 - ONE UPSTREAM AND ONE DOWNSTREAM
 - AND AN INTERFACE BETWEEN THE TWO
- THERE CAN BE HORIZONTAL PROBLEMS IN EITHER MARKET AND HORIZONTAL GUIDELINES SHOULD APPLY
 - EXAMPLE: US VERTICAL GUIDELINES REFER TO THE HORIZONTAL GUIDELINES FOR TREATMENT OF MARKET DEFINITION, SHARES, AND CONCENTRATION

CONDITION 2:

EXAMPLES:

- SEVERAL AUTHORS HAVE STUDIED VERTICAL MERGERS IN THE CRUDE OIL/GASOLINE INDUSTRY
 - HASTINGS (2004)
 - STUDY OF TOSCO/UNOCAL MERGER
 - HOUDE (2012)
 - STUDY OF ULTRAMAR AND SUNOCO'S EXCHANGE OF SERVICE STATIONS
- CONCLUDE THAT THEY WERE INEFFICIENT
- THE PROBLEMS WERE HORIZONTAL – INCREASED CONCENTRATION DOWNSTREAM
- CANNOT CLASSIFY AS INEFFICIENT VERTICAL MERGERS

The background features a light gray gradient with several realistic water droplets of various sizes scattered in the corners. The droplets have highlights and shadows, giving them a three-dimensional appearance. The text is centered in the middle of the slide.

THE RELEVANT EMPIRICAL EVIDENCE

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A CAVEAT

- LAFONTAINE AND SLADE (2007) OFTEN CITED AS EVIDENCE IN FAVOR VM EFFICIENCY
 - WE EXAMINE THE *CHOICE* BETWEEN INTEGRATION, SEPARATION, OR AN ALTERNATIVE, NOT VERTICAL MERGERS
 - WE ASK HOW WELL THE THEORETICAL MODELS PERFORM (PREDICTING OUTCOMES)
 - THE MODELS ARE NOT STRATEGIC AND THE INDUSTRIES ARE MOSTLY WORKABLY COMPETITIVE
 - MANY FORWARD INTEGRATION STUDIES INVOLVE EXCLUSIVE DEALING – RIVALS ALREADY FORECLOSED
 - MANY BACKWARD INTEGRATION STUDIES INVOLVE SPECIFIC ASSETS – RIVALS PARTIALLY FORECLOSED
 - WE ALSO EXAMINE *CONSEQUENCES*
 - THE EVIDENCE THAT WE EXAMINE CONCERNING FORECLOSURE AND RRC IS MIXED
 - STUDIES OF PRICE, INVESTMENT, HOURS, AND OTHER CONSEQUENCES TEND TO BE FAVORABLE TO VI
 - BUT THE NUMBER IS SMALL
 - THERE IS LITTLE INFORMATION THAT CAN BE USED TO PROMOTE OR ATTACK VERTICAL MERGERS

THE EMPIRICAL EVIDENCE

- WE HAVE COLLECTED A SET OF 12 STUDIES THAT WE THINK ARE RELEVANT
 - THEY ARE EMPIRICAL STUDIES OF ACTUAL VERTICAL MERGERS AND USE PRE AND POST MERGER DATA
 - E.G., NO EX ANTE SIMULATIONS OR HYPOTHETICAL STUDIES
 - THEY INVOLVE INDUSTRIES THAT MIGHT BE OF CONCERN TO AUTHORITIES
 - E.G., NO FRANCHISING
 - THEY EXAMINE CONSEQUENCES THAT CAN BE TAKEN AS EVIDENCE OF (IN)EFFICIENCY
 - E.G., NO STUDIES THAT SIMPLY SHOW THAT AN INTEGRATED FIRM FAVORS ITS INTEGRATED PRODUCTS

THE EMPIRICAL EVIDENCE (CONT.)

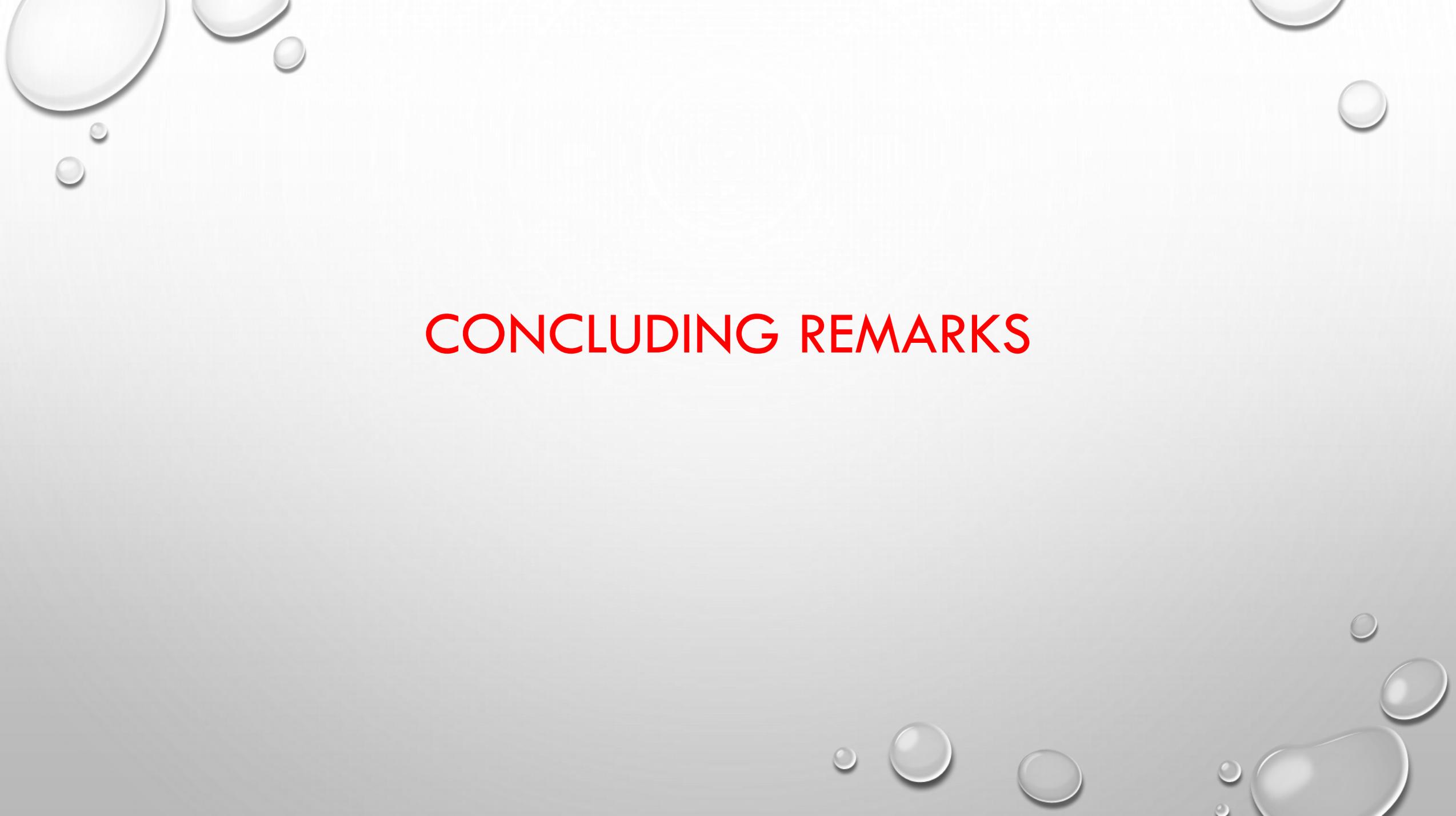
- THE VARIABLE THAT IS EXAMINED (THE CONSEQUENCES):
 - PRICE TO DOWNSTREAM CUSTOMERS (5)
 - STOCK MARKET ABNORMAL RETURNS (3)
 - PRICE TO DOWNSTREAM FIRMS (2)
 - HEALTH OUTCOMES (1)
 - BREAKS IN BUYER/SELLER RELATIONSHIPS (1)
- THE METHOD THAT IS USED:
 - DIFFERENCE IN DIFFERENCES (7)
 - STOCK MARKET EVENT STUDY (3)
 - OTHER(2)

THE RELEVANT EMPIRICAL (CONT.)

- THE INDUSTRIES THAT ARE STUDIED:
 - 4 MEDIA: 3 CABLE TV, 1 FILM
 - 2 BEVERAGES: 1 BEER, 1 SOFT DRINKS
 - 1 ENERGY: PETROLEUM
 - 1 MINING: IRON ORE AND STEEL
 - 1 HEALTH: HOSPITALS AND PHYSICIANS
 - 3 VARIOUS INDUSTRIES
- FINDINGS:
 - 4 (+), 2 (-), 6 (0)
 - CAN DISPUTE THE CLASSIFICATION, PARTICULARLY THE ZEROES

THE EMPIRICAL EVIDENCE (CONT.)

- SOME STUDIES ARE MORE RELEVANT THAN OTHERS
 - THREE ARE STOCK MARKET EVENT STUDIES
 - THEY EVALUATE INVESTOR EXPECTATIONS, NOT REALIZED OUTCOMES
 - IF WE DROP THOSE STUDIES WE ARE LEFT WITH 2 (+), 2 (-), 5 (0)
 - ONE LOOKS AT BREAKS IN BUYER/SELLER RELATIONSHIPS
 - FINDS: MORE APT TO OCCUR AFTER A BUYER ACQUIRES A COMPETITOR OF THE DOWNSTREAM FIRM
 - EVIDENCE THAT INTEGRATED FIRMS FAVOR THEIR INTEGRATED PRODUCTS; CAN BE GOOD OR BAD
 - DROP THAT ONE AND WE ARE LEFT WITH 2 (+), 1 (-), 5 (0)
 - NO MATTER HOW YOU CUT THE DATA, THE EVIDENCE IS NOT STRONG

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CONCLUDING REMARKS

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- THE NUMBER OF RETROSPECTIVE VERTICAL MERGER STUDIES IS SMALL
 - MANY FEWER THAN IN THE HORIZONTAL CASE
 - THE FTC'S RETROSPECTIVE MERGER PROJECT INCLUDES 27 HORIZONTAL AND ONLY ONE VERTICAL MERGER STUDY
 - ABOUT THE SAME RATIO AS CHALLENGED HORIZONTAL TO VERTICAL MERGERS
- THE EVIDENCE IS MIXED
 - SOME POSITIVE, SOME NEGATIVE, AND SOME NEUTRAL
- THIS DOES NOT FORM THE BASIS FOR A PRESUMPTION

CONCLUDING REMARKS (CONT.)

- THERE IS CAUSE FOR CONCERN ABOUT SOME VERTICAL MERGERS
 - THE MERGERS THAT CAUSE CONCERN TEND TO
 - HAVE RECOGNIZABLE CHARACTERISTICS
 - COME FROM A RECOGNIZABLE SET OF INDUSTRIES
 - WE HAVE RULES OF THUMB THAT FLAG ANTICOMPETITIVE MERGERS
- NEED MORE EVIDENCE BEFORE WE CAN FORMULATE EMPIRICALLY JUSTIFIABLE PRESUMPTIONS

CONCLUDING REMARKS (CONT.)

- NO EVIDENCE IN THIS CASE MEANS:
 - TOO FEW STUDIES
 - MANY ARE INCONCLUSIVE OR NOT COMPLETELY RELEVANT
- WHERE DO WE GO FROM HERE?
- TWO DIRECTIONS FOR APPLIED ECONOMISTS
 - WE NEED MORE RETROSPECTIVE VERTICAL MERGER STUDIES
 - CAN PERHAPS POOL DATA ACROSS COUNTRIES AND AUTHORITIES
 - WE NEED SIMPLE VERTICAL MERGER SCREENS