Scale Measures

METRICS:

THICKNESS

METRICS:

- Buyers (Advertisers)
  NUMBER & DIVERSITY
- Sellers (Publishers)
  NUMBER & DIVERSITY

METRICS:

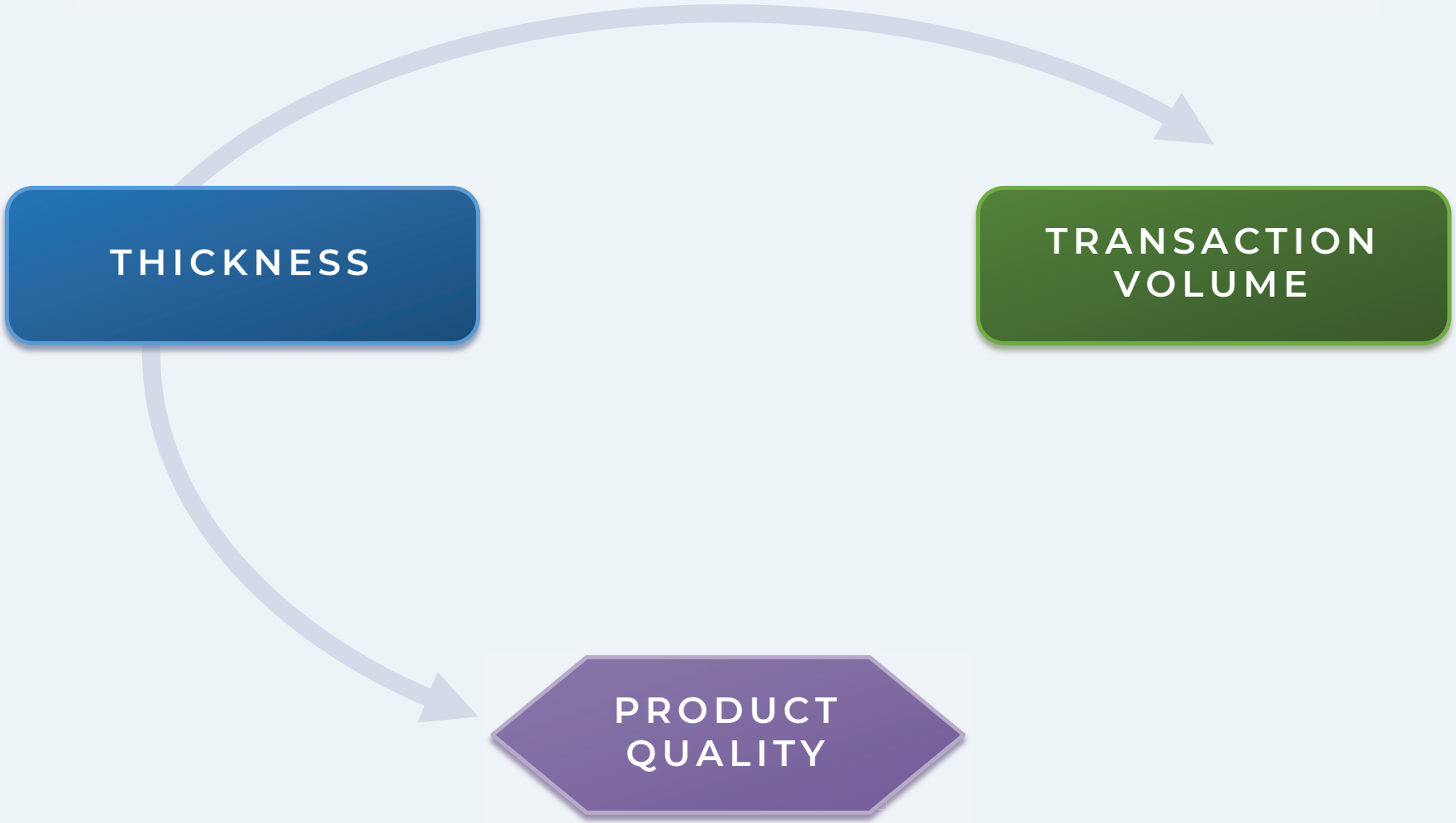
TRANSACTION VOLUME

METRICS:

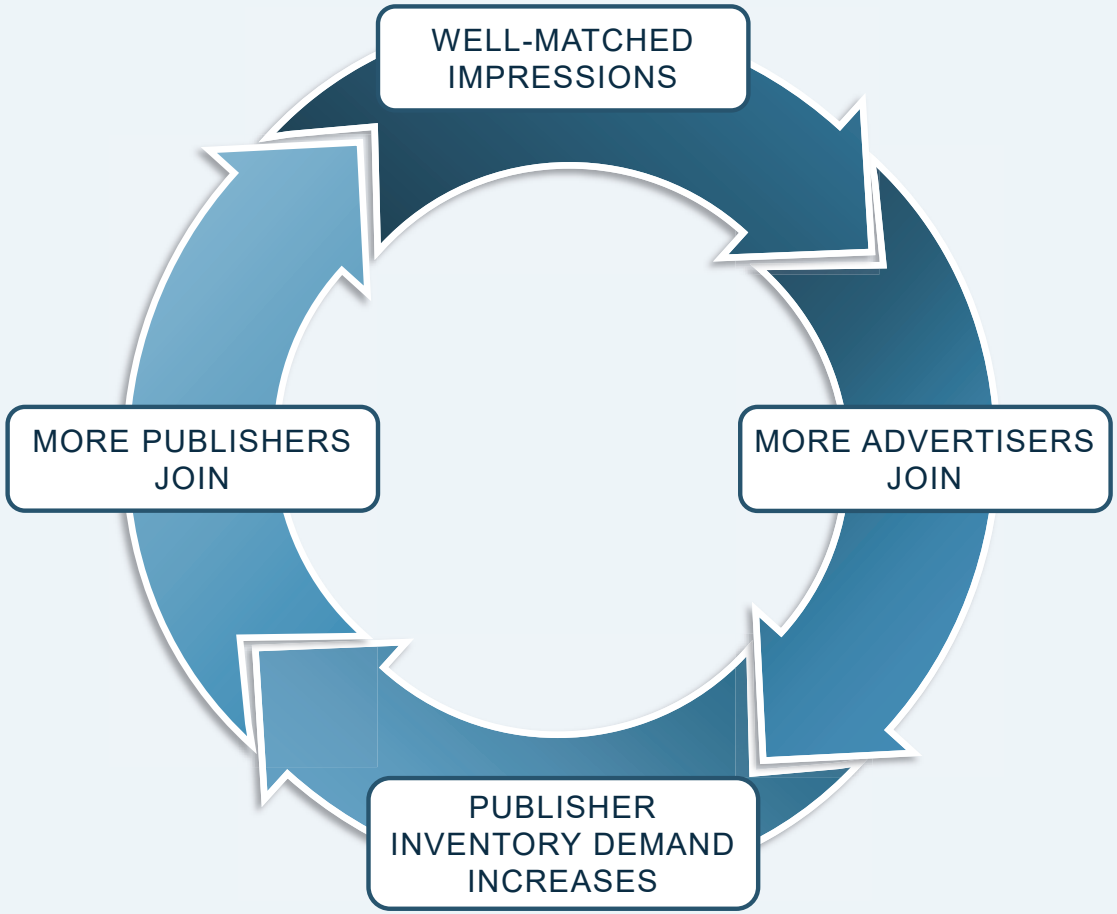
- Impressions
- Ad Spend
- Queries
- Win Rate

Pls. Demonstrative
N
1:23-cv-00108

Why Scale Matters: Thickness

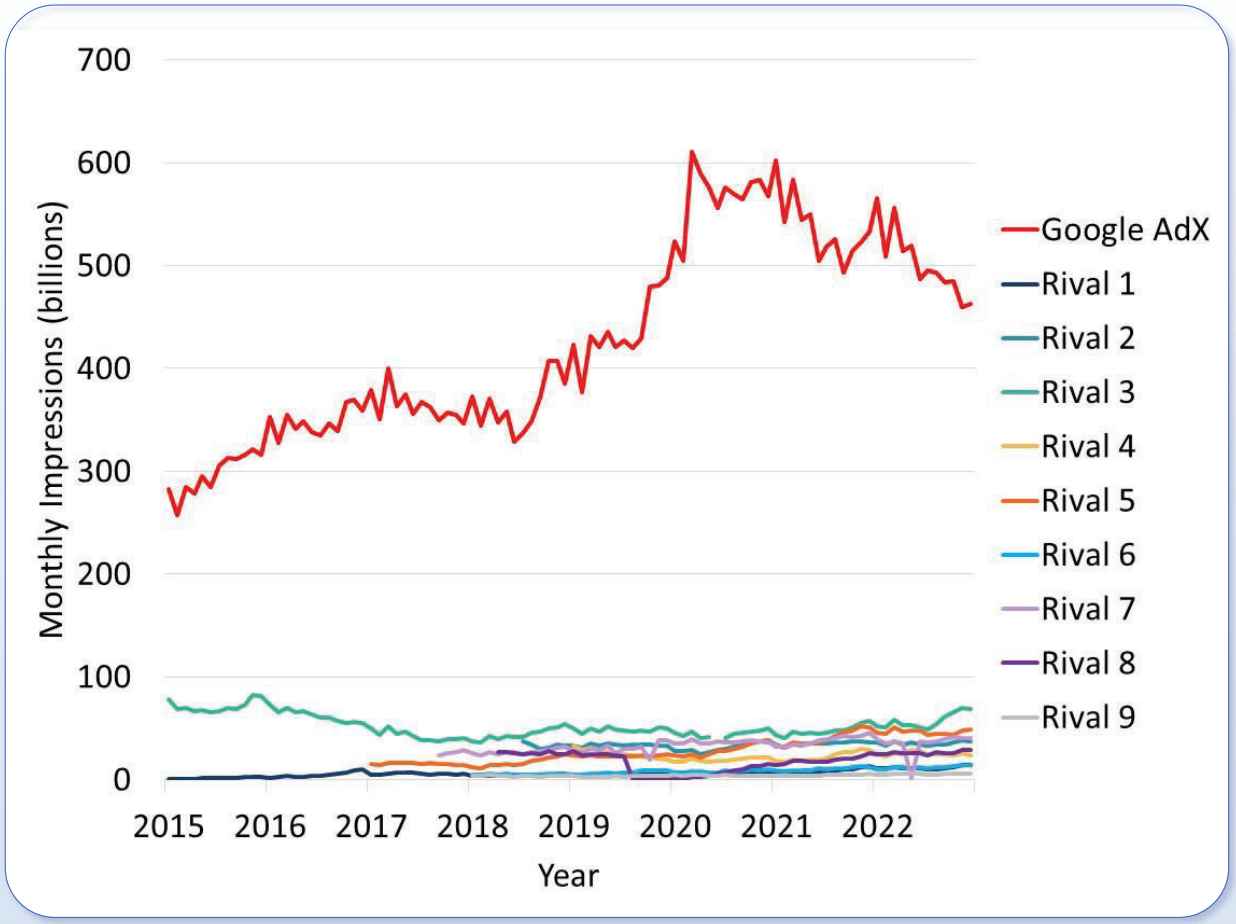


Indirect Network Effects Create Growth



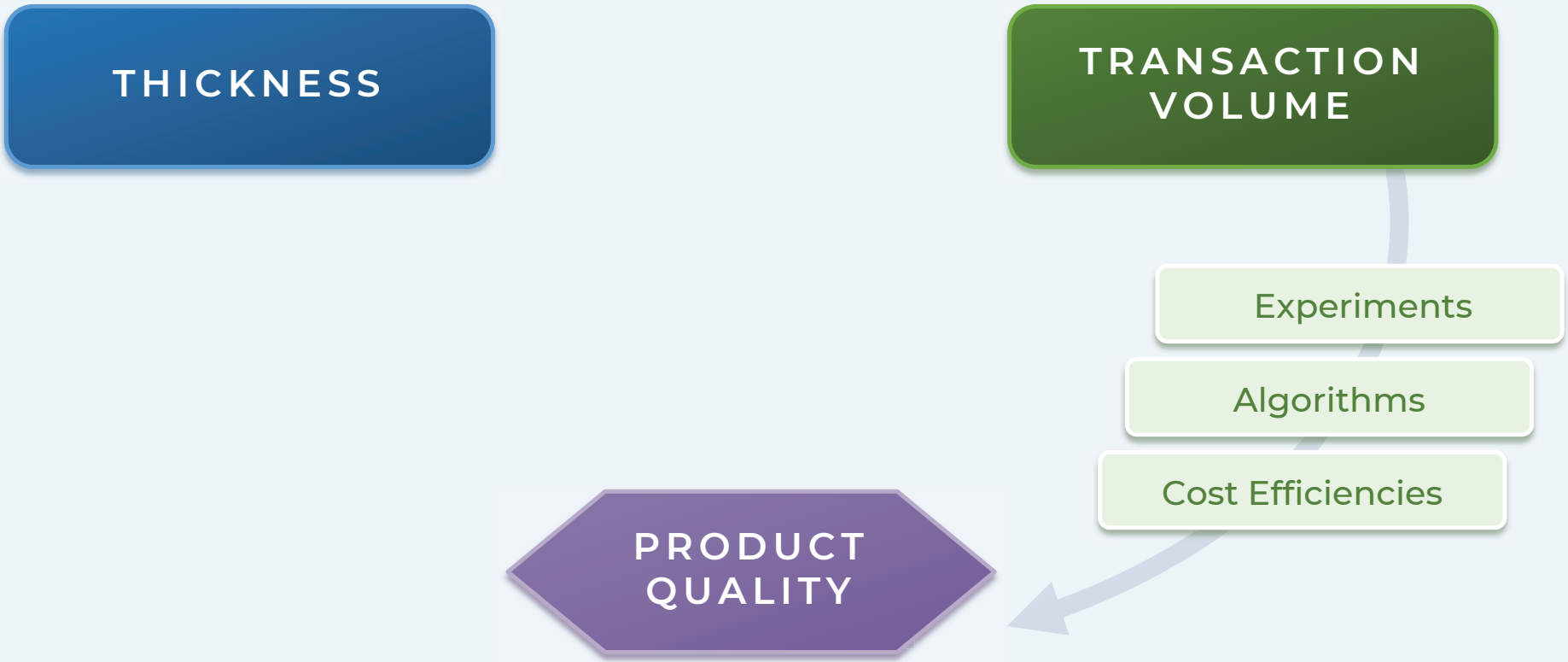
Source: Expert Report of Gabriel Weintraub, Ph.D., Figure 3.

Transaction Volume: Impressions by Ad Exchange



PTX1314

Why Scale Matters: Transaction Volume



Scale And Experiments

NUMBER OF DAYS UNTIL THE EXPERIMENT CAN DETECT A 0.05% INCREASE IN WIN RATE

SEPTEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 AdX (1 day)	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Source: Expert Report of Gabriel Weintraub, Ph.D., Figure 17 and Power Analysis Workpaper.

Scale And Experiments

NUMBER OF DAYS U.NTIL THE EXPERIMENT CAN DETECT A 0.05% INCREASE IN WIN RATE



Source: Expert Report of Gabriel Weintraub, Ph.D., Figure 17 and Power Analysis Workpaper.

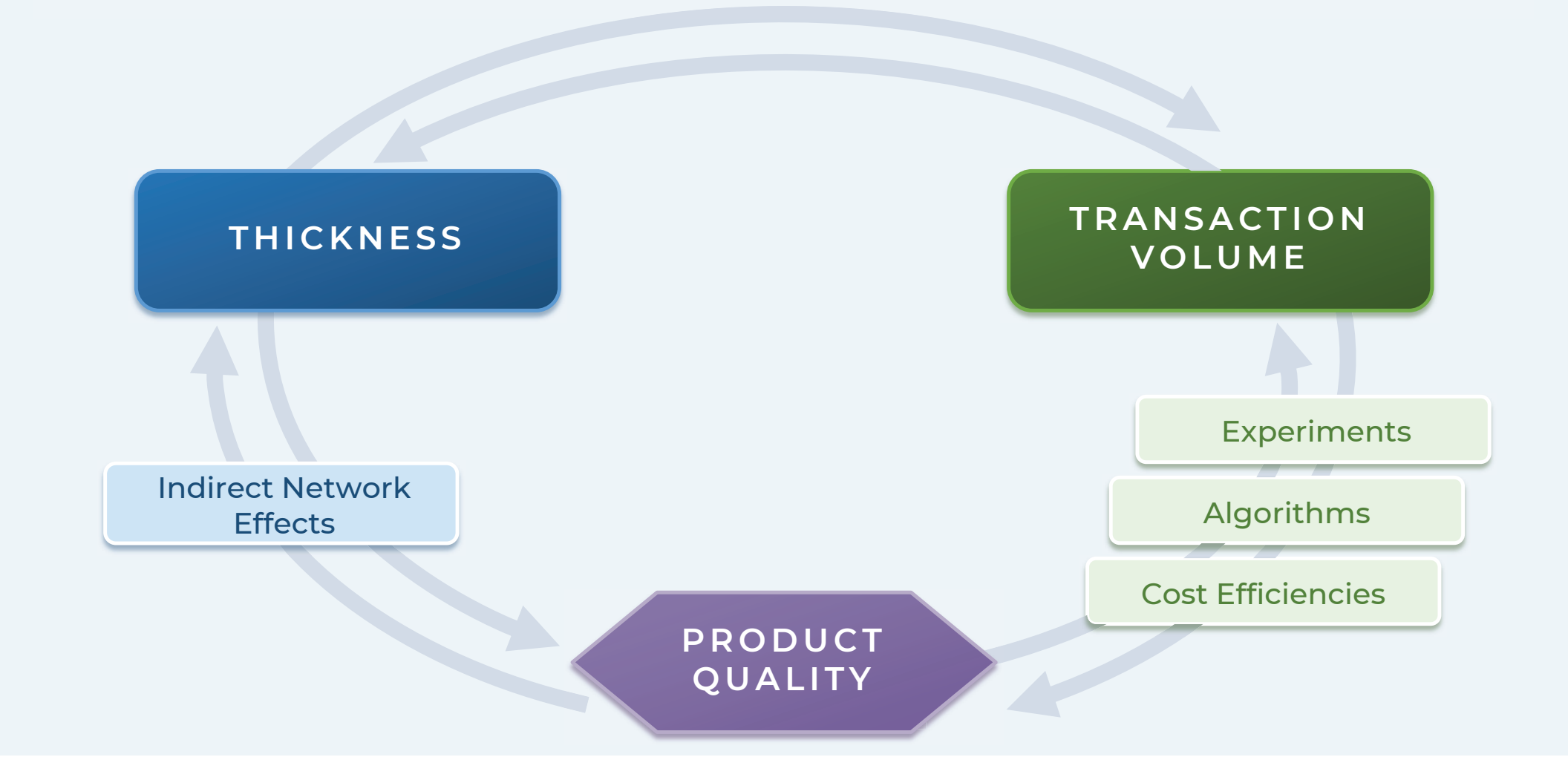
Scale And Experiments

NUMBER OF DAYS UNTIL THE EXPERIMENT CAN DETECT A 0.05% INCREASE IN WIN RATE



Source: Expert Report of Gabiel Weintraub, Ph.D., Figure 17 and Power Analysis Workpaper.

Scale Benefits From Feedback Loops

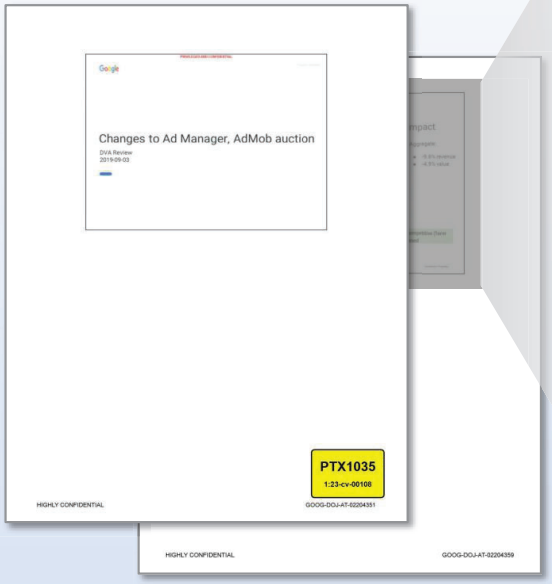


Data Sources Relied Upon

- Google's Experimental Results
- Monthly Data on Impressions and Ad Spend
  - Google
  - Third-Party Exchanges
- Google's Auction-Level Data

Google's Experimental Results

September 3, 2019 Google Presentation
"Changes to Ad Manager" AdMob Auction



Removing Last Look* has significant negative impact

	Impressions	Value Clamped	Revenue	Google Profit	GDN profit	Post Revshare Payout
LastLookOverDfpRemnant::GlobalControl 246003051 TOTAL * Adx_Only * Web	548,549,820	1,786,486	690,764	154,233	56,196.1323	511,824
itPriceFromSettingWinnerCostExperiment 246003052 TOTAL * Adx_Only * Web	496,914,005 -9.41% [-9.56, -9.26] %	1,699,227 -4.88% [-5.65, -4.12] %	624,314 -9.62% [-9.95, -9.29] %	144,356 -6.40% [-7.95, -4.86] %	54,296.8083 -3.38% [-7.79, 1.03] %	457,340 -10.64% [-10.79, -10.50] %
LastLookOverDfpRemnant::GlobalControl 246003051 Adwords_Buyer * Adx_Only * Web	333,223,170	418,763	248,815	73,917	35,312.8161	174,720
itPriceFromSettingWinnerCostExperiment 246003052 Adwords_Buyer * Adx_Only * Web	298,497,863 -10.42% [-10.58, -10.26] %	375,698 -10.28% [-11.15, -9.42] %	220,983 -11.19% [-12.16, -10.21] %	69,427 -6.07% [-9.41, -2.74] %	34,838.0716 -1.34% [-8.48, 5.79] %	151,396 -13.35% [-13.48, -13.22] %
LastLookOverDfpRemnant::GlobalControl 246003051 Dbm_Buyer * Adx_Only * Web	108,676,700	1,164,124	287,571	62,827	20,883.3162	200,201
itPriceFromSettingWinnerCostExperiment 246003052 Dbm_Buyer * Adx_Only * Web	102,152,821 -6.00% [-6.18, -5.83] %	1,147,250 -1.45% [-2.59, -0.31] %	269,666 -6.23% [-6.43, -6.02] %	59,667 -5.03% [-5.32, -4.74] %	19,458.7367 -6.82% [-7.04, -6.61] %	187,530 -6.33% [-6.52, -6.14] %

Aggregate:

- -9.6% revenue
- -4.9% value

But allows bundling of other valuable changes, that can be positioned as pro-competitive (fairer platform for *all* buyers); Pub outreach to reduce HB boosts planned

** This impact is measured in a 2P auction state comparing performance with and without last look; Rasta source;*

Google

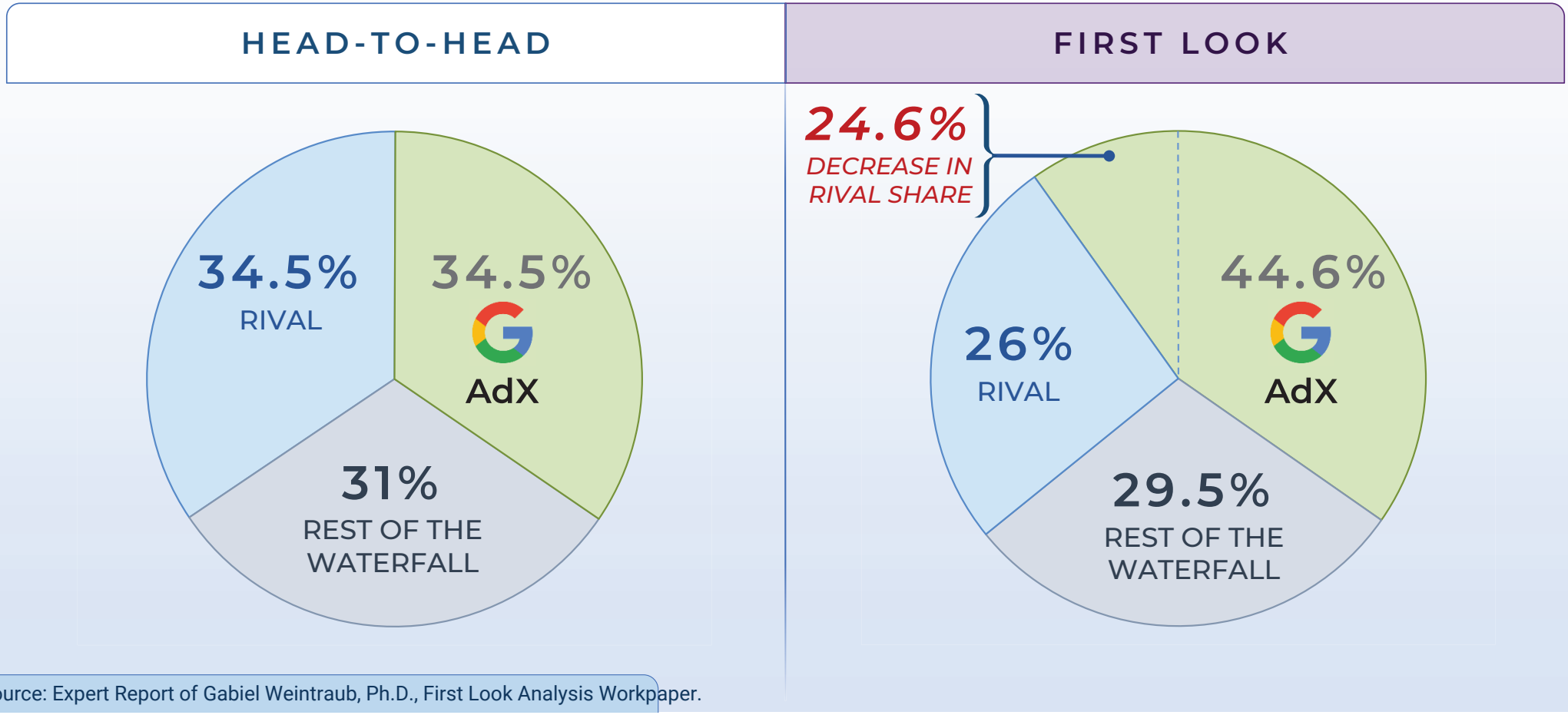
Confidential + Proprietary

Conduct

- First Look
- Last Look
- Sell-side DRS (SSDRS)
- Unified Pricing Rules (UPR)
- Poirot
- Exclusivities

Effects: First Look

SHARE OF IMPRESSIONS WON



Source: Expert Report of Gabiel Weintraub, Ph.D., First Look Analysis Workpaper.

Annual Effects of Conduct

LAST LOOK
(Substitution from Rival Exchanges)



-492.4 BILLION IMPRESSIONS

(-14.25%)



-$473 MILLION AD SPEND

(-8.72%)

Annual Effects of Conduct

SELL-SIDE DRS
(Substitution from Rival Exchanges)



-81.7 BILLION IMPRESSIONS

(-2.39%)



-$161.6 MILLION AD SPEND

(-2.74%)

Annual Effects of Conduct

UNIFIED PRICING RULES
(Substitution from Rival Exchanges)



-366.9 BILLION IMPRESSIONS

(-7.95%)



-$220.9 MILLION AD SPEND

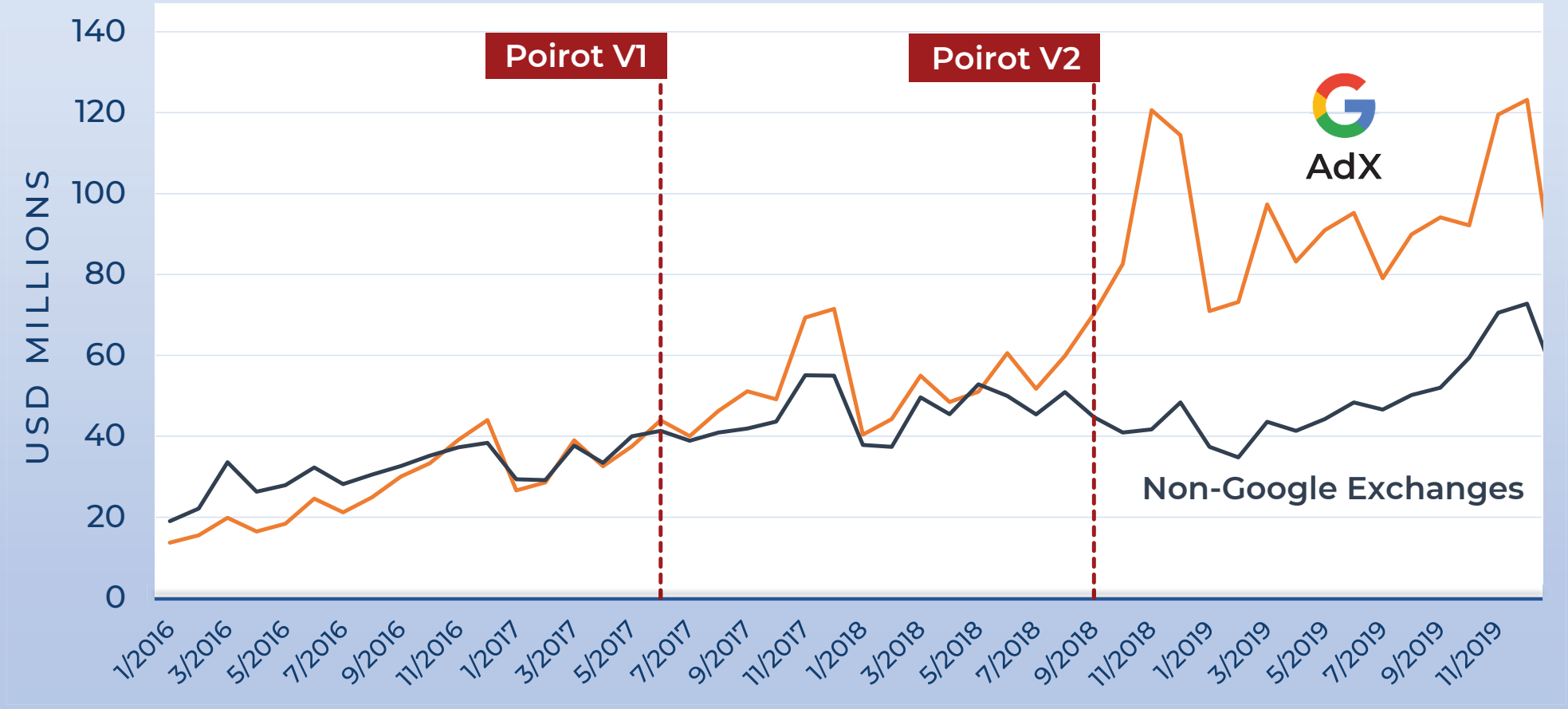
(-2.75%)

Annual Effects of Conduct

PROJECT POIROT

	VERSION 1	VERSION 2
	**-42.4 BILLION IMPRESSIONS** (-1.26%)	**-245.6 BILLION IMPRESSIONS** (-4.10%)
	**-$59.5 MILLION AD SPEND** (-1.76%)	**-$267.9 MILLION AD SPEND** (-4.45%)

Poirot: Ad Spend by DV360

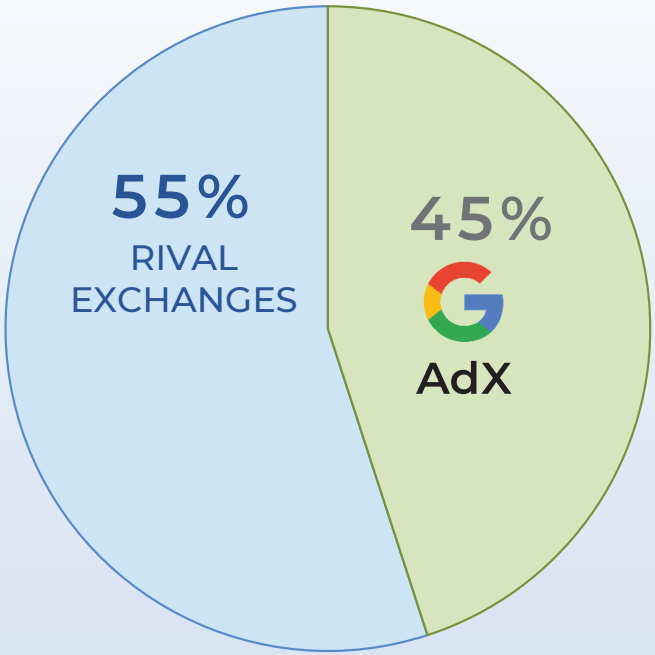


Source: Expert Rebuttal Report of Gabriel Weintraub, Ph.D., Figure 3 and Impact of Poirot Workpaper.

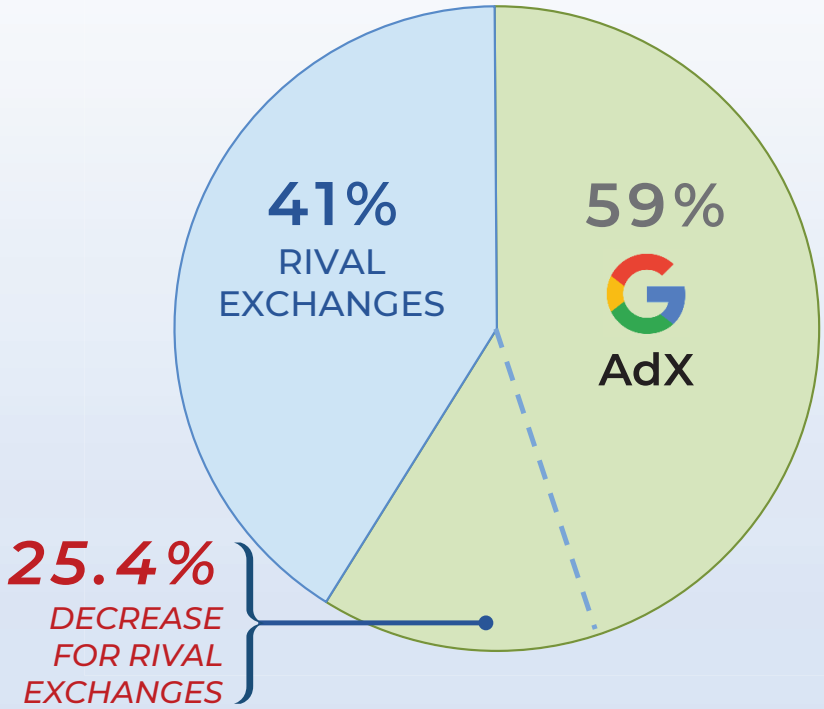
Effects: Google Ads Exclusivity

SHARE OF IMPRESSIONS AMONG IMPRESSIONS WON BY GOOGLE ADX OR RIVALS

WITHOUT GOOGLE ADS RESTRICTION



WITH GOOGLE ADS RESTRICTION



Expert Rebuttal Report of Gabriel Weintraub, Ph.D., Google Ads Restriction Workpaper.

Effects on Rivals' Ability to Compete

