Direct Testimony of Jonathan Baker

State of Colorado et al. v. Google LLC, 1:20-cv-03715

Subject to Protective Order (ECF #98)
October 25, 2023

EXHIBIT
PSXD-11

Assignment

Evaluate States' claim that Google has harmed competition by engaging in:

- Exclusive preinstallation default agreements
- SA360-related conduct

Note: Expert Report of Jonathan B. Baker (Jun. 6, 2022, corrected Oct. 26, 2022) [hereinafter "JB1"]; Rebuttal Report of Jonathan B. Baker (Aug. 5, 2022, corrected Oct. 26, 2022) [hereinafter "JB2"]; Reply Report of Jonathan B. Baker (Sep. 26, 2022, corrected Oct. 26, 2022) [hereinafter "JB3"]; Supplemental Materials of Jonathan B. Baker (Oct. 29, 2022) [hereinafter "JB4"]; Summary of Expert Reports of Jonathan B. Baker (Jul. 18, 2023) [hereinafter "JB5"].

Source: JB1 ¶ 69; JB3 ¶ 2.

Approach to Understanding Competitive Effects

- Study the industry in which Google operates to understand how firms compete and the effects of Google's business practices on competition
- Evaluate the extent to which Google exercises market power in three markets involving general search and general search advertising
- Evaluate whether, and, if so, how the conduct individually or collectively affected:
  - The incentive and ability of Google's rivals to compete
  - Google's ability to exercise market power
  - Competition in the three markets

Source: JB3 ¶ 3.

Summary of Opinions

- Google exercises substantial market power in each of three markets
  - General search services in the U.S.
  - General search text advertising in the U.S.
  - General search advertising in the U.S.
- Google's exclusive defaults and its SA360-related conduct collectively reduced the incentive and ability of all of Google's actual or potential rivals to compete with it in each of those markets
- Google has harmed competition by protecting from erosion its substantial market power in each of those markets

Source: JB3 ¶¶ 25-26, 35-37, 42-44, 101-112; JB5 ¶¶ 4, 35-36, 105.

Market Definition and Market Power

Two Sources of Information about Buyer Substitution

Information about how products differ in characteristics likely to matter to buyers

What can be inferred about buyer substitution from seller behavior, like the products sellers monitor and respond to

Source: JB1 ¶ 156.

Two Sources of Information about Buyer Substitution

Information about how products differ in characteristics likely to matter to buyers

What can be inferred about buyer substitution from seller behavior, like the products sellers monitor and respond to

- Differences in characteristics of search services
- Differences among types of ads and how advertisers use them

Source: JB1 ¶ 156.

Two Sources of Information about Buyer Substitution

Information about how products differ in characteristics likely to matter to buyers

What can be inferred about buyer substitution from seller behavior, like the products sellers monitor and respond to

- Those could include complements as well as substitutes
- Firms may monitor products that are substitutes for the product they sell in other markets

Source: JB1 ¶ 156; JB3 ¶¶ 85-87, n. 204.

Two Sources of Information about Buyer Substitution

Information about how products differ in characteristics likely to matter to buyers

What can be inferred about buyer substitution from seller behavior, like the products sellers monitor and respond to

- The best information in any category could be qualitative or quantitative
- In some cases, information in some categories may not be strongly probative or even available

Source: JB1 ¶ 156.

General Search Services

Online services that:

- Respond to user queries on a wide range of topics by giving users choices derived from a broad range of online information
- Let users navigate from query responses to a wide range of online sites

Distribution of U.S. General Search Queries on Google Across Google's Level-1 Query Segments May 2 to May 8, 2021 (Top 15 Segments)

No.	Segment	% Queries
1	Arts & Entertainment	REDACTED [redacted]
2	Health	[redacted]
3	Shopping	[redacted]
4	Food & Drink	[redacted]
5	Reference	[redacted]
6	Home & Garden	[redacted]
7	Sports	[redacted]
8	People & Society	[redacted]
9	Autos & Vehicles	[redacted]
10	Travel	[redacted]
11	Business & Industrial	[redacted]
12	Computers & Electronics	[redacted]
13	Adult	[redacted]
14	Finance	[redacted]
15	Jobs & Education	[redacted]

Note: Other segments account for REDACTED [redacted] of queries.

Source: PSX00867.006 (JB1 Tbl 6 (Google Query Data)), ¶¶ 160-169; JB3 ¶ 28; JB5 ¶¶ 17-19.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

- General search provides responses from the Internet as a whole
- General search provides greater breadth and one-stop searching convenience
- General search facilitates navigation to a wide range of sites

Source: JB1 ¶¶ 25-28, 160-169; JB5 ¶¶ 17-19.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

- General search provides responses from the Internet as a whole
- General search provides greater breadth and one-stop searching convenience
- General search facilitates navigation to a wide range of sites

Source: JB1 ¶¶ 25-28, 160-169; JB5 ¶¶ 17-19.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

General search provides responses that are taken from the Internet as a whole

- SVPs provide responses that are not taken from the Internet as a whole:
  - Responses are taken from the limited set of information available on their websites

Source: JB1 ¶¶ 25-28, 169-177; JB5 ¶ 21; Amaldoss Testimony, Slides 10-11, 23.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

- General search provides responses from the Internet as a whole
- General search provides greater breadth and one-stop searching convenience
- General search facilitates navigation to a wide range of sites

Source: JB1 ¶¶ 25-28, 160-169; JB5 ¶¶ 17-19.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

- General search provides responses from the Internet as a whole
- General search provides greater breadth and one-stop searching convenience
  - Breadth: ability to respond with a broad range of information and information sources to a wide range of user queries
  - One-stop searching convenience: ability to obtain satisfactory responses to multiple queries, from multiple sources, without switching sites
- General search facilitates navigation to a wide range of sites

Source: JB1 ¶¶ 25-28, 160-169; JB5 ¶¶ 17-19.

Analysis of Breadth and One-Stop Searching Convenience

- Analyzed the responses provided on the first page of Google's SERP to all queries made in a sample week

- For each query, used Google's classification scheme to identify:
  - The query's segment
  - The segments of each of the information sources identified in each of the responses to the query

For example,
a query for "halloween"

- Query segment: "Hobbies & Leisure"
- Responses from information sources classified as: "Reference," "Shopping," "Arts & Entertainment"

Source: JB3 ¶¶ 29, 67, Fig 3 (Google Query Data); JB5 ¶¶ 18-19.

Breadth and One-Stop Searching Convenience in a Single Query

Frequency that Google Shows SERP Results of Domains Outside of Google's Level-One Query Classification, May 2 to May 8, 2021

On average more than half of the results contain information from segments outside of the segment in which the query itself was classified

The breadth of general search services facilitates one-stop searching convenience

Source: JB3 ¶¶ 65, 67, PSX00869.003 (JB3 Fig 3 (Google Query Data)); JB5 ¶¶ 18-19.

Breadth and One-Stop Searching Convenience in a Single Query

Frequency that Google Shows SERP Results of Domains Outside of Google's Level-One Query Classification, May 2 to May 8, 2021

On average more than half of the results contain information from segments outside of the segment in which the query itself was classified

The breadth of general search services facilitates one-stop searching convenience

Source: JB3 ¶¶ 65, 67, PSX00869.003 (Fig 3 (Google Query Data)); JB5 ¶¶ 18-19.

Breadth and One-Stop Searching Convenience Over Multiple Queries

Based on Google Sessions Data,
November 6-7, 2019 & May 4 and May 6, 2021

REDACTED

Nearly REDACTED of sessions involve users searching in more than one segment

The breadth of general search services facilitates one-stop searching convenience

Source: PSX00869.004 (JB3 Fig 4 (Google Sessions Data)).

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

General search provides greater breadth and one-stop searching convenience

- SVP sites generally provide a narrower range of information, typically from the vertical segment in which the SVP specializes

Source: JB1 ¶ 25-28, 169-177; JB3 ¶¶ 29, 86; JB5 ¶ 21.

Search Results Provided in Response to Query for "ufos"

Website	Number of Search Results	Description of Results
Google	1.94 billion	• The first page of the SERP included headlines and links to a number of news stories (from the Military Times, The Hill, Newsweek, and Oregon Live, with an option for more news). • The first page of the SERP also included a "See results about" box with information about "Unidentified flying object" and "Ufology," as well as nine algorithmic results.
Amazon	> 10,000	• All the results on the results page described a product related to UFOs that might be purchased. These included books on UFOs, electronic gadgets, toys, and lighting.
Expedia	None	
HomeAdvisor	None	

Source: PSX00867.007 (JB1 Tbl 7).

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

- General search provides responses from the Internet as a whole
- General search provides greater breadth and one-stop searching convenience
- General search facilitates navigation to a wide range of sites
  - The blue links on the SERP allow users to click out to wide range of online sites
  - The most popular navigational searches on Google include searches for YouTube, Facebook, and Amazon

Source: JB1 ¶¶ 25-28, 160-169; JB5 ¶¶ 17-19.

Searching on an SVP Site Is Generally Not a Close Substitute for General Search

General search facilitates navigation to a wide range of sites

- SVPs that let users complete transactions do not facilitate navigation to other sites
- Other SVPs only facilitate navigation to sites in their segments where a transaction can be made (e.g., For example, a user can use TripAdvisor to navigate to Expedia and Booking, but not to Facebook)

Source: JB1 ¶¶ 25-28, 169-177; JB3 ¶¶ 29, 86; JB5 ¶ 21.

Search on SVP Sites Complements General Search Services for Many Users

The two types of search often work together:

- General search often sends search users to SVP sites
- SVP users are generally lower in the marketing funnel (closer to purchase) than general search users

Source: JB1 ¶¶ 125, 205-206; JB3 ¶ 82; JB5 ¶ 28.

General Search Is an Important Source of Traffic to SVPs

SVPs' Share of Visits Referred by General Search Firms, Selected Segments, All Devices, Apr 2020 to Apr 2022

Local Services SVPs: 46% to 88%	Shopping SVPs: 34% to 65%	Travel Flights SVPs: 43% to 76%	Travel Hotels SVPs: 33% to 73%
Handy	Amazon	Hotwire	Airbnb
Care	Ebay	Skyscanner	Booking
Thumbtack	Stockx	Orbitz	Hotels
Houzz	Poshmark	Kayak	Hotwire
AngiesList & Angie	Nordstrom	Priceline	Kayak
HomeAdvisor	Etsy	Expedia	Expedia
Porch	Target	Cheapoair	Trivago
Yelp	Walmart	Travelocity	Travelocity
Manta	Kohls	TripAdvisor	Hotelplanner
Yellowpages	Flightclub	Cheapflights	TripAdvisor

For these SVPs, visits from general search firms accounted for 33% to 88% of their online traffic

Note: These SVPs are among those that appear most frequently in a top five blue link or an ad in response to a search query within the segment. SVPs are listed in increasing order of share of visits referred by general search firms.

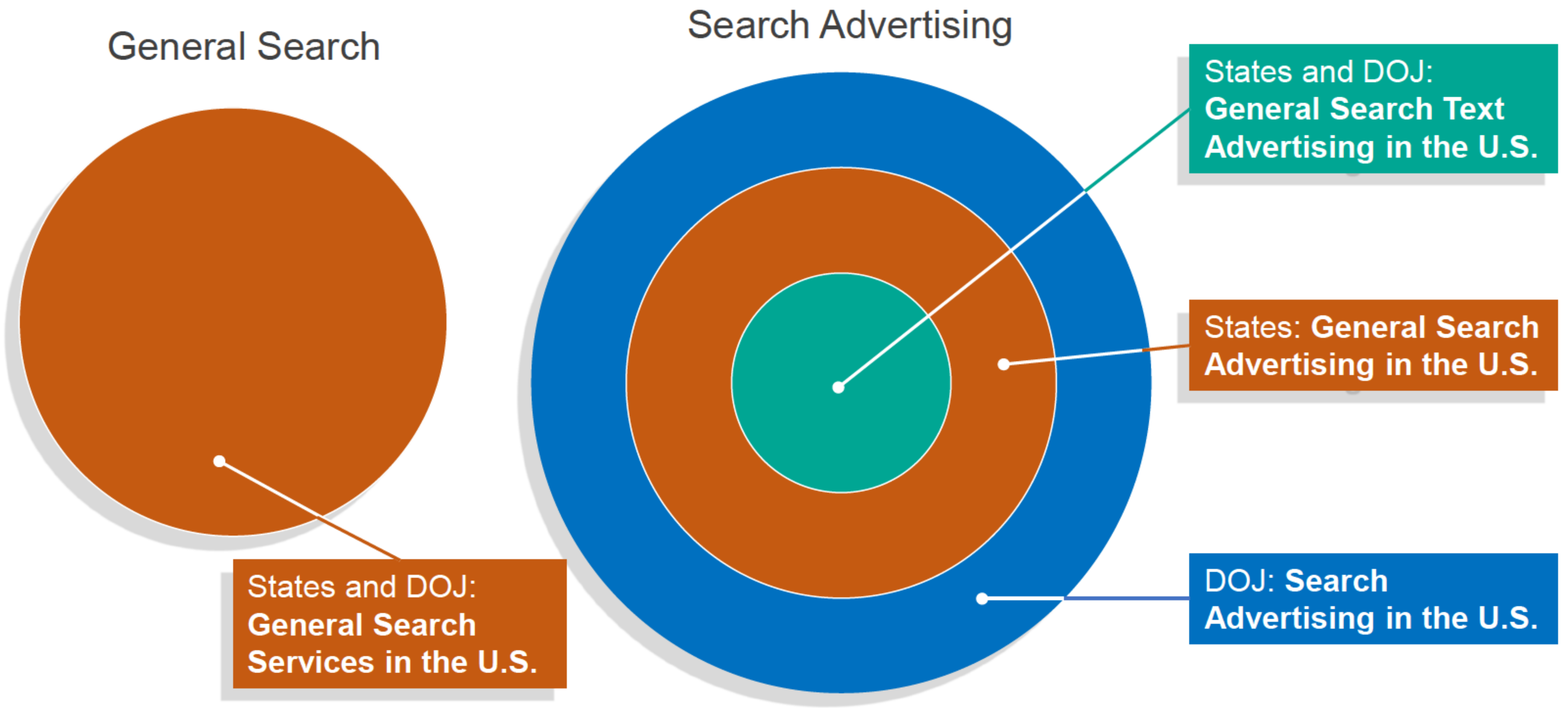
Source: PSX00866.020-PSX00866.023 (JB1 Figs 20-23) (Google Query Data; Similarweb), ¶ 124 n. 125.

Advertiser Behavior Indicates that SVP Users Are Generally Lower in the Marketing Funnel

- Advertisers typically use general search ads to target consumers when they are in the research and consideration stage of their purchase journey
- Advertisers typically use ads on SVP sites to target consumers in a lower stage of the funnel, closer to a purchase decision

Source: JB1 ¶¶ 197, 205-206; JB3 ¶ 82; JB5 ¶¶ 25-28; Amaldoss Testimony, Slides 10-11.

Nested Markets for Search Advertising



Source: JB1 ¶¶ 185-190, Fig 13 (advertising markets); JB5 ¶¶ 23-24.

[redacted] of Google's Advertisers Buy Its General Search Text Ads

Google General Search Text and Non-Text Advertising U.S. Ad Buyers and Revenue, All Devices, 2019

	No. of Advertisers	Revenue (in $ Mil)
Text Ad-Only	REDACTED	
Non-Text Ad-Only		
Text Ad and Non-Text		
Total		

Source: PSX00867.003 (JB1 Tbl 3 (Google Ad Data, Vlahov (Google) Deposition Exh 2)).

Types of Online Ads Advertisers Might Consider Buying

General Search Ads

- General search text ads
- Vertically-focused general search ads
  - Shopping ads (PLAs)
  - Hotel ads
  - Local services ads

Common Non-General Search Ads

- Ads on SVP sites or search firms' immersive sites
- Display ads

Other Non-General Search Ads

- Social search ads
- Retargeted display ads

Source: JB1 ¶¶ 191-195, 200-206; JB5 ¶¶ 25-31; Amaldoss Testimony, Slides 17-18, 23, 25, 27-28; Booth (Oct. 11, 2023) Tr, 5214:17-5215:4; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

Types of Online Ads Advertisers Might Consider Buying

General Search Ads

- General search text ads
- Vertically-focused general search ads
  - Shopping ads (PLAs)
  - Hotel ads
  - Local services ads

Designed for certain types of businesses

Common Non-General Search Ads

- Ads on SVP sites or search firms' immersive sites
- Display ads

Other Non-General Search Ads

- Social search ads
- Retargeted display ads

Source: JB1 ¶¶ 191-195, 200-206; JB5 ¶¶ 25-31; Amaldoss Testimony, Slides 17-18, 23, 25, 27-28; Booth (Oct. 11, 2023) Tr, 5214:17-5215:4; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

Types of Online Ads Advertisers Might Consider Buying

General Search Ads

- General search text ads
- Vertically-focused general search ads
  - Shopping ads (PLAs)
  - Hotel ads
  - Local services ads

Common Non-General Search Ads

- Ads on SVP sites or search firms' immersive sites
- Display ads

- Both typically target customers at a different stage of their purchase journey
- Display ads also differ in appearance and content and are not shown in response to a user query

Other Non-General Search Ads

- Social search ads
- Retargeted display ads

Source: JB1 ¶¶ 191-195, 200-206; JB5 ¶¶ 25-31; Amaldoss Testimony, Slides 17-18, 23, 25, 27-28; Booth (Oct. 11, 2023) Tr, 5214:17-5215:4; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

Types of Online Ads Advertisers Might Consider Buying

General Search Ads

- General search text ads
- Vertically-focused general search ads
  - Shopping ads (PLAs)
  - Hotel ads
  - Local services ads

Common Non-General Search Ads

- Ads on SVP sites or search firms' immersive sites
- Display ads

Other Non-General Search Ads

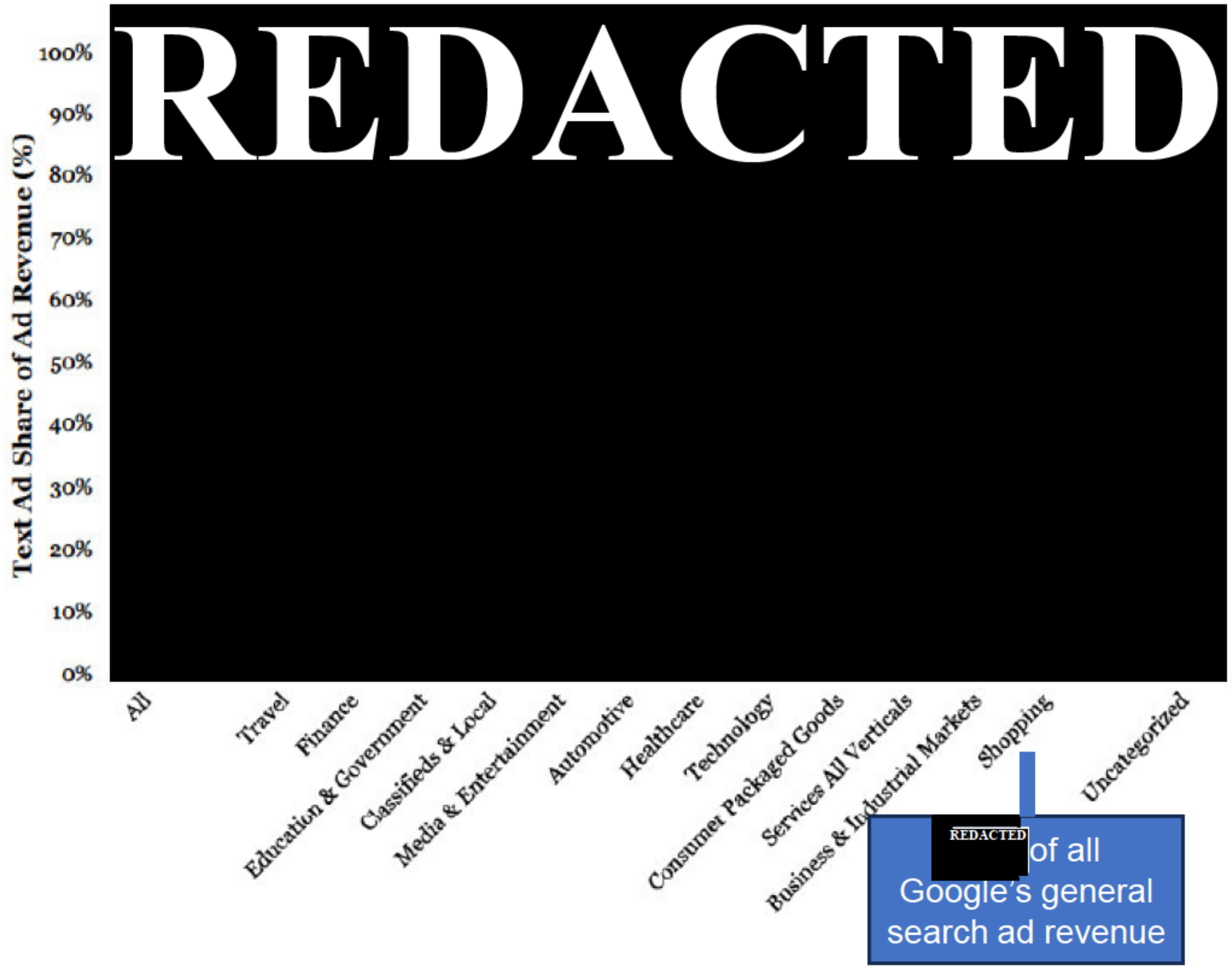
- Social search ads
- Retargeted display ads

- Social search ads are nascent and not readily scalable
- Retargeted ads are not displayed in response to immediate user intent

Source: JB1 ¶¶ 191-195, 200-206; JB5 ¶¶ 25-31; Amaldoss Testimony, Slides 17-18, 23, 25, 27-28; Booth (Oct. 11, 2023) Tr, 5214:17-5215:4; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

General Search Text Ads Account for the Vast Majority of Google's General Search Ad Revenue

General Search Text Advertising Share of Total U.S. General Search Ad Revenues, Google Data, All Devices, 2019



Source: PSX00866.007(JB1 Fig 7 (Google Ad Data)), PSX000866.014 (Fig 14 (Google Ad Data)).

Types of Online Ads Advertisers Might Consider Buying

General Search Ads

- General search text ads
- Vertically-focused general search ads
  - Shopping ads (PLAs)
  - Hotel ads
  - Local services ads

Common Non-General Search Ads

- Ads on SVP sites or search firms' immersive sites
- Display ads

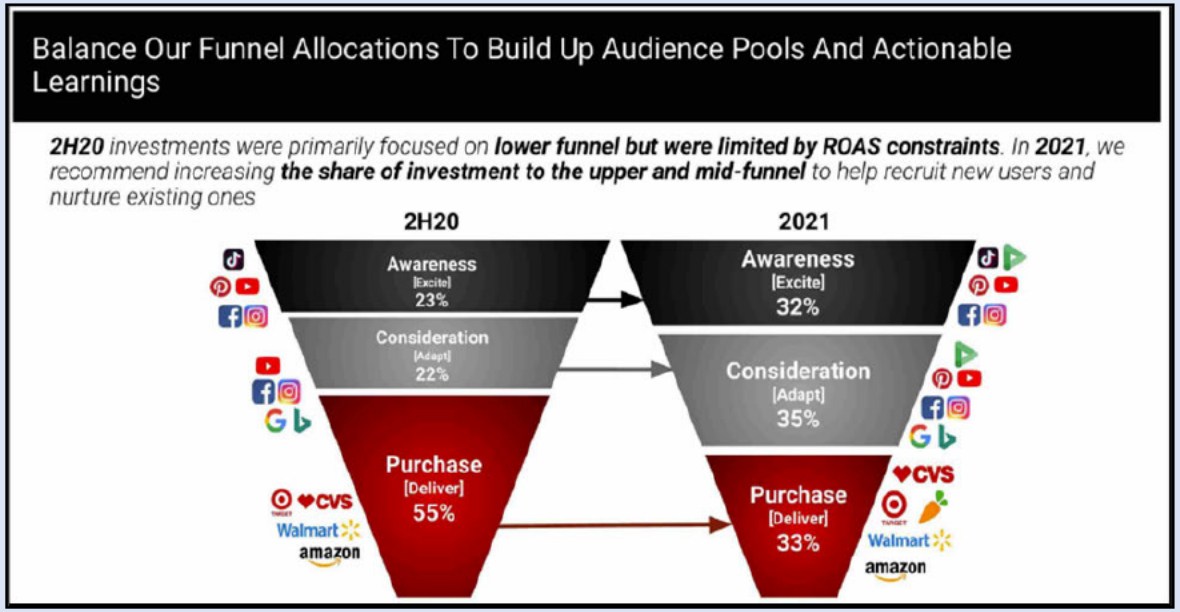
Other Non-General Search Ads

- Social search ads
- Retargeted display ads

Source: JB1 ¶¶ 191-195, 200-206; JB5 ¶¶ 25-31; Amaldoss Testimony, Slides 17-18, 23, 25, 27-28; Booth (Oct. 11, 2023) Tr, 5214:17-5215:4; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

SVP Ads Are Generally Not a Close Substitute for Shopping Ads on General Search

- Advertisers typically use SVP ads and general search ads, including shopping ads, to target consumers in different stages of the marketing funnel
- *See, e.g.*, testimony from Professor Amaldoss



Source: JB1 ¶¶ 16, 165-166, 205-206, JB3 ¶ 89, n. 218; JB5 ¶¶ 25-31; Amaldoss Testimony, Slide 12.

SVP Ads Are Generally Not a Close Substitute for Shopping Ads on General Search

- SVP ads have features that can make them less attractive to advertisers than general search ads, including shopping ads
- *See, e.g.*, testimony from Professor Amaldoss

Impact of Consumer Mindset

General search ads v. SVP ads

Practical differences

- Advertisers typically must sell on an SVP in order to buy ads on that SVP whereas anyone can purchase a general search ad.
- Advertisers who see the SVP as a competitive threat would not tend to purchase an ad on that SVP.

Functional differences

- Advertisers generally pay general search engines on a cost per click basis whereas SVPs generally also take a percentage of each transaction.
- General search ads are usually "click out" and SVP sites are usually "click in." Advertisers prefer "click out" ads to build direct relationships with customers.

Source: JB1 ¶¶ 16, 165-166, 205-206, JB3 ¶ 89, n. 218; JB5 ¶¶ 25-31; Amaldoss Testimony, Slide 23.

SVPs Are Large Purchasers of Ads on Google's SERP

Professor Elzinga's Analysis of Google's Largest Advertisers

EXHIBIT 9
Some of Google's largest advertisers are SVPs, 2021

Revenue
(Millions of dollars)

REDACTED

Non-SVPs
SVPs

Source: RFP 2 Request 42(b) - Top 250 Search Advertisers (2012-2021).xlsx, produced in response to DOJ RFP 42(b) dated March 25, 2022
Note: The chart shows Google's ad revenue associated with each of the 10 largest advertisers in 2021. REDACTED is the parent company of REDACTED among others.

Note: JB1 Tbl 2 shows that four of the top five Google general search advertisers were SVPs: REDACTED
Source: KE1 Exh 9 (legend added); PSX00867.002 (JB1 Tbl 2 (Google Ad Data)).

A High Return on Investment on Multiple Ad Channels Does Not Show the Channels Are Substitutes

- It could mean that the channels work together for an advertiser that wants to reach consumers at different stages of the marketing funnel, leading the advertiser to buy high ROI ads on more than one channel
- For example, an advertiser might want to raise awareness of its brand, by buying more display ads on high ROI display ad channels, to make its general search ads more effective
- Other high ROI ads channels may not be close substitutes for general search even if they reach consumers in same stage of the funnel because they are not readily scalable

Source: JB1 ¶¶ 208-209; JB3 ¶¶ 31, 96-100; JB5 ¶ 29; Booth (Oct. 11, 2023) Tr, 5207:18-5208:25; Interview with Bethany Evans (The North Face), Sep. 14, 2022.

Share of U.S. General Search Queries by General Search Firm, 2012 to 2021

Year	Google	Bing	Yahoo!	DuckDuckGo	Others
2012	79.5%	10.0%	8.9%	0.1%	1.6%
2013	81.0%	9.6%	7.5%	0.1%	1.7%
2014	82.1%	10.2%	6.1%	0.2%	1.5%
2015	83.0%	9.3%	6.2%	0.2%	1.2%
2016	86.0%	8.4%	4.3%	0.3%	0.9%
2017	85.8%	8.0%	5.2%	0.4%	0.6%
2018	86.7%	8.0%	4.3%	0.6%	0.4%
2019	87.8%	7.6%	3.3%	1.0%	0.3%
2020	88.6%	6.8%	2.8%	1.4%	0.4%
2021	88.9%	6.3%	2.5%	1.9%	0.4%

Source: PSX00867.016 (JB1 Tbl 16 (Google QueryNav Data, Google Access Point Data, Microsoft Ad Data, DuckDuckGo Query Data, Statcounter)); JB5 Exh 3.

Share of U.S. General Search Text Clicks and Ad Revenue by General Search Firm, 2020 and 2021

Metric	Year	Google	Bing	Yahoo!	DuckDuckGo	Others
Revenue	2020	89.4%	6.7%	2.3%	1.3%	0.4%
	2021	89.8%	6.1%	1.8%	1.9%	0.4%
Clicks	2020	85.2%	7.8%	5.1%	1.5%	0.4%
	2021	86.3%	7.1%	3.9%	2.2%	0.5%

Source: PSX00867.018 (JB1 Tbl 18 (Google QueryNav Data, Google Access Point Data, Microsoft Ad Data, DuckDuckGo Query Data, Statcounter)); JB5 Exh 4.

Share of U.S. General Search Ad Revenue by General Search Firm, 2012 to 2021

Year	Google	Bing	Yahoo!	DuckDuckGo	Others
2012	83.9%	7.8%	7.0%	0.0%	1.3%
2013	81.9%	8.9%	7.6%	0.0%	1.6%
2014	81.4%	9.4%	7.8%	0.0%	1.4%
2015	82.5%	9.1%	7.3%	0.0%	1.1%
2016	86.8%	8.3%	3.9%	0.0%	0.9%
2017	88.3%	7.4%	3.7%	0.1%	0.6%
2018	89.2%	7.2%	3.2%	0.1%	0.3%
2019	89.6%	7.0%	2.9%	0.1%	0.3%
2020	91.3%	6.0%	2.1%	0.2%	0.3%
2021	92.1%	5.5%	1.7%	0.3%	0.4%

New competition did not erode Google's substantial market power in general search advertising

Source: PSX00867.017 (JB1 Tbl 17 (Google QueryNav Data, Google Access Point Data, Microsoft Ad Data, DuckDuckGo Query Data, Statcounter, Microsoft Syndication Data)); JB5 Exh 5.

Direct Evidence of Google's Market Power in the Advertising Markets

- Advertiser demand is not very responsive to a small increase in Google's ad prices
  - Many advertisers describe advertising on Google as essential or nearly so
  - Google's advertising revenue typically increased when it raised ad prices by 5%
  - Google's high price-cost margin on ads indicates Google view that its demand was not very responsive to price

Source: JB3 ¶¶ 26, 104-105; JB5 ¶ 36; Dischler (Sep. 18, 2023) Tr, 1209:5-8; Hurst (Oct. 19, 2023) Tr, 6515:21-6516:1; Dijk (Oct. 11, 2023) Tr, 5237:9-23.

Three Examples Showing Increasing SVP Customer Acquisition Costs Over Time

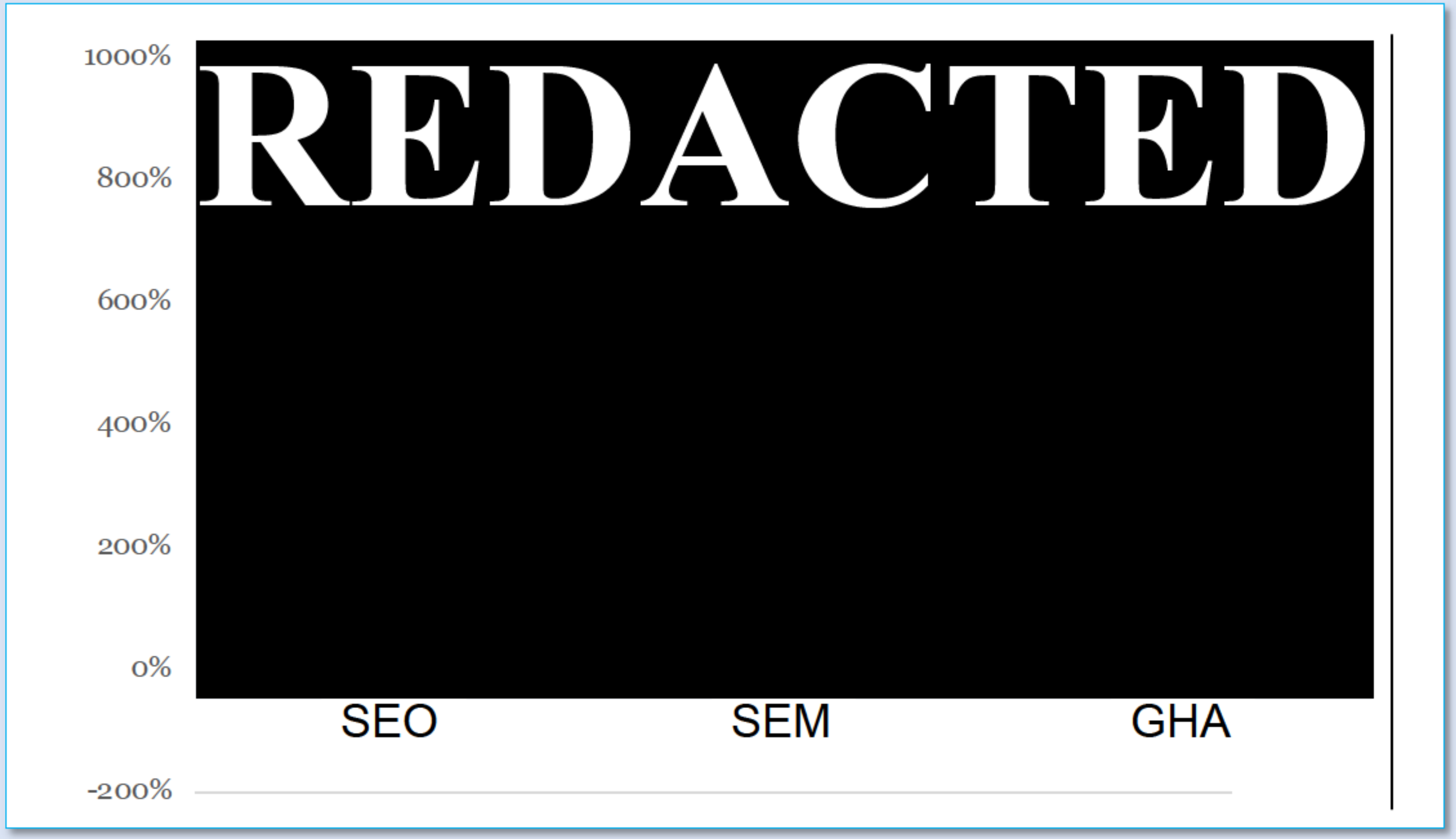
- Booking, 2015 to 2019
- Expedia, 2012 to 2018 / 2019
- VRBO, 2016 to October 2019

- Each experienced a substantial rise in the cost of acquiring customer traffic from Google, while they were continuing to advertise on Google
- Each attributed the cost increase to Google's practices

Source: Slides 44-46 *infra*; JB1 ¶¶ 295, 297; JB2 ¶¶ 59-60; JB5 ¶¶ 65-68.

Booking.com's Customer Acquisition Costs Have Increased as Its Mix of Traffic from Google Changed

Booking.Com Clicks by U.S.-Based Searchers on Google SEO, Google SEM, and Google Hotel Ads: Change from 2015 to 2019

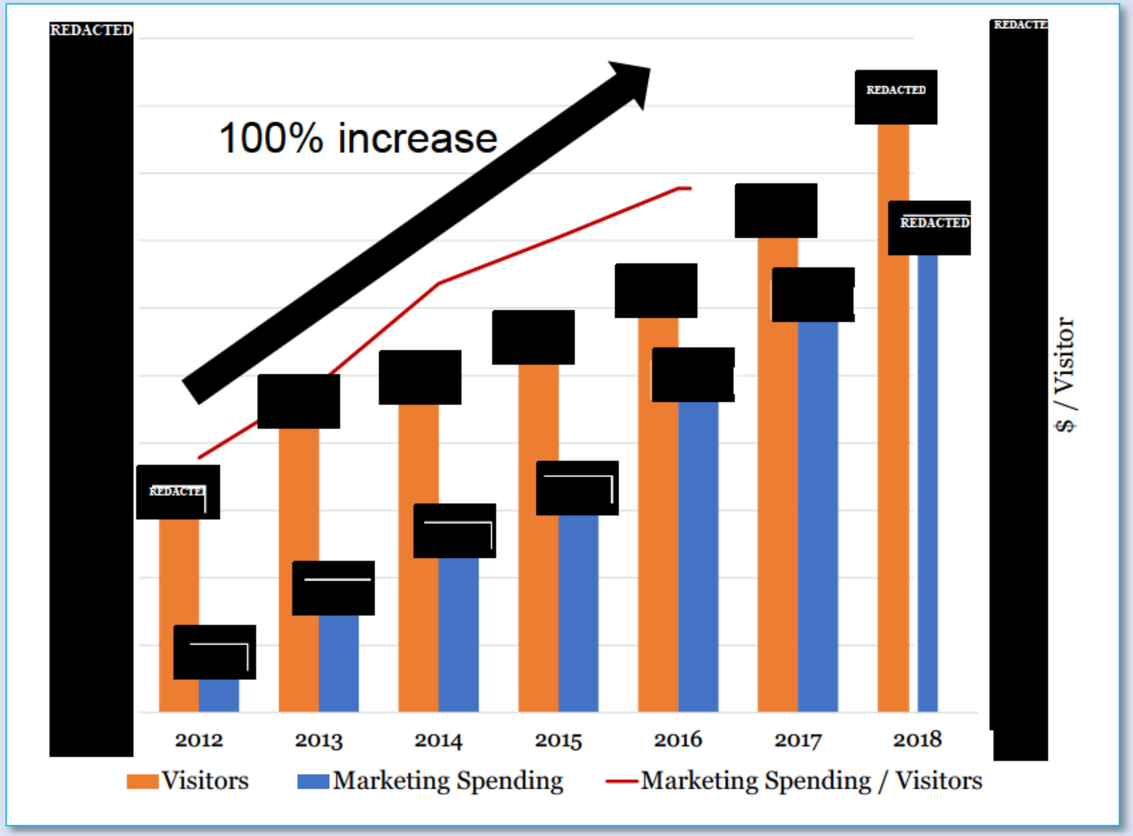


"If in September 2019 the fraction of clicks coming from paid and free were the same as it was at the start of 2015, Booking.com would have spend [sic] REDACTED %, or REDACTED in 2019 less to buy the same number of clicks."

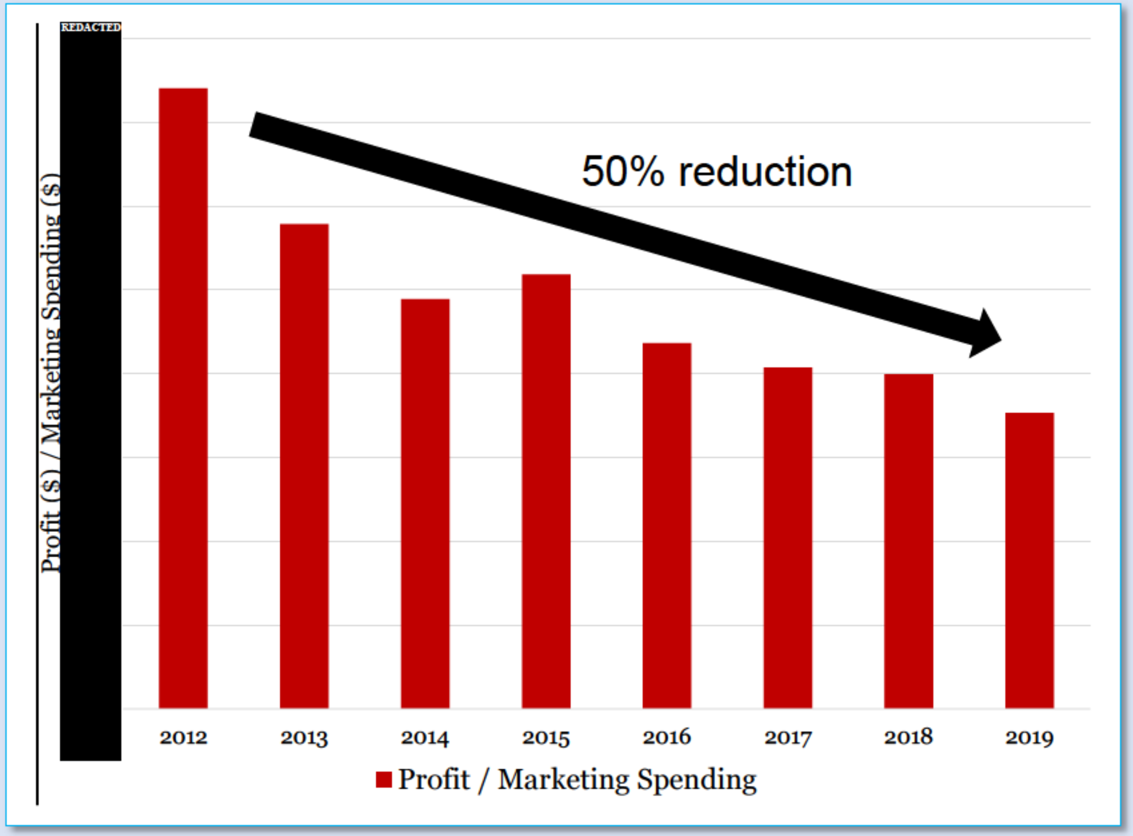
Source: PSX00866.029 (JB1 Fig 29 (DOJ_BKNG-00001176 at 193)); JB5 Exh 16; Dijk (Oct. 11, 2023) Tr, 5293:18-5299:12.

Expedia's Customer Acquisition Costs Have Increased

Expedia's Marketing Spending and Visitors on General Search and the Google Immersives



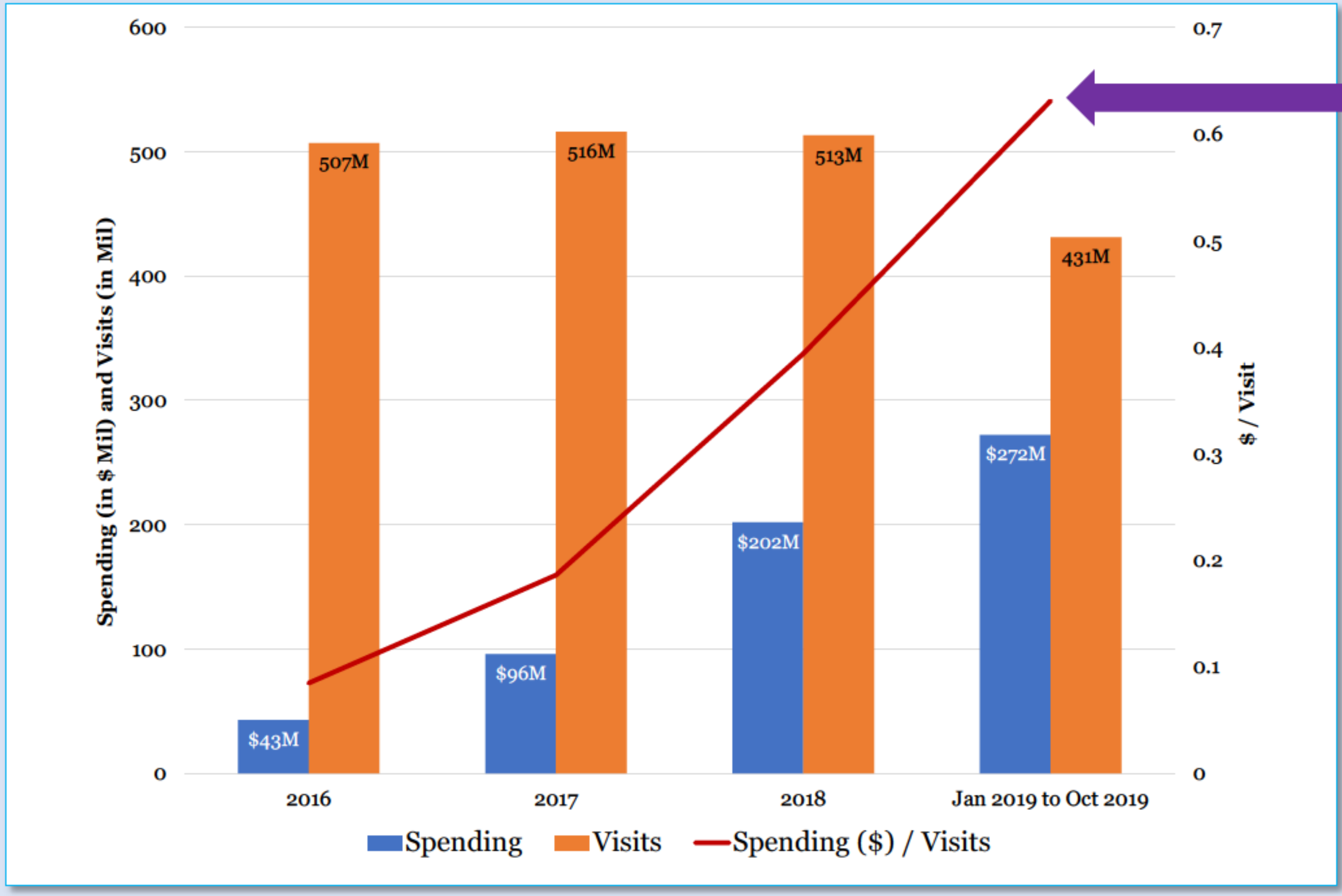
Expedia's Return on Marketing
Gross Profit Per Dollar of Marketing Spending
General Search and the Google Immersives



Source: PSX00863.004-PSX00863.005 (JB2 Figs 4-5 (Expedia Traffic Acquisition Data)); JB5 Exhs 12-13.

VRBO's Customer Acquisition Costs Have Increased, 2016 to Oct 2019

VRBO's Google General Search Spending and Visits
Blue Links and General Search Ads



Marketing costs per visitor in 2019 was seven times the cost in 2016

Source: PSX00866.028 (JB1 Fig 28 (Hurst (Expedia) Deposition Exh 18)); JB5 Exh 15; Hurst (Oct. 19, 2023) Tr, 6521:7-6524:25.

Testimony on SVP Customer Acquisition Cost Increases

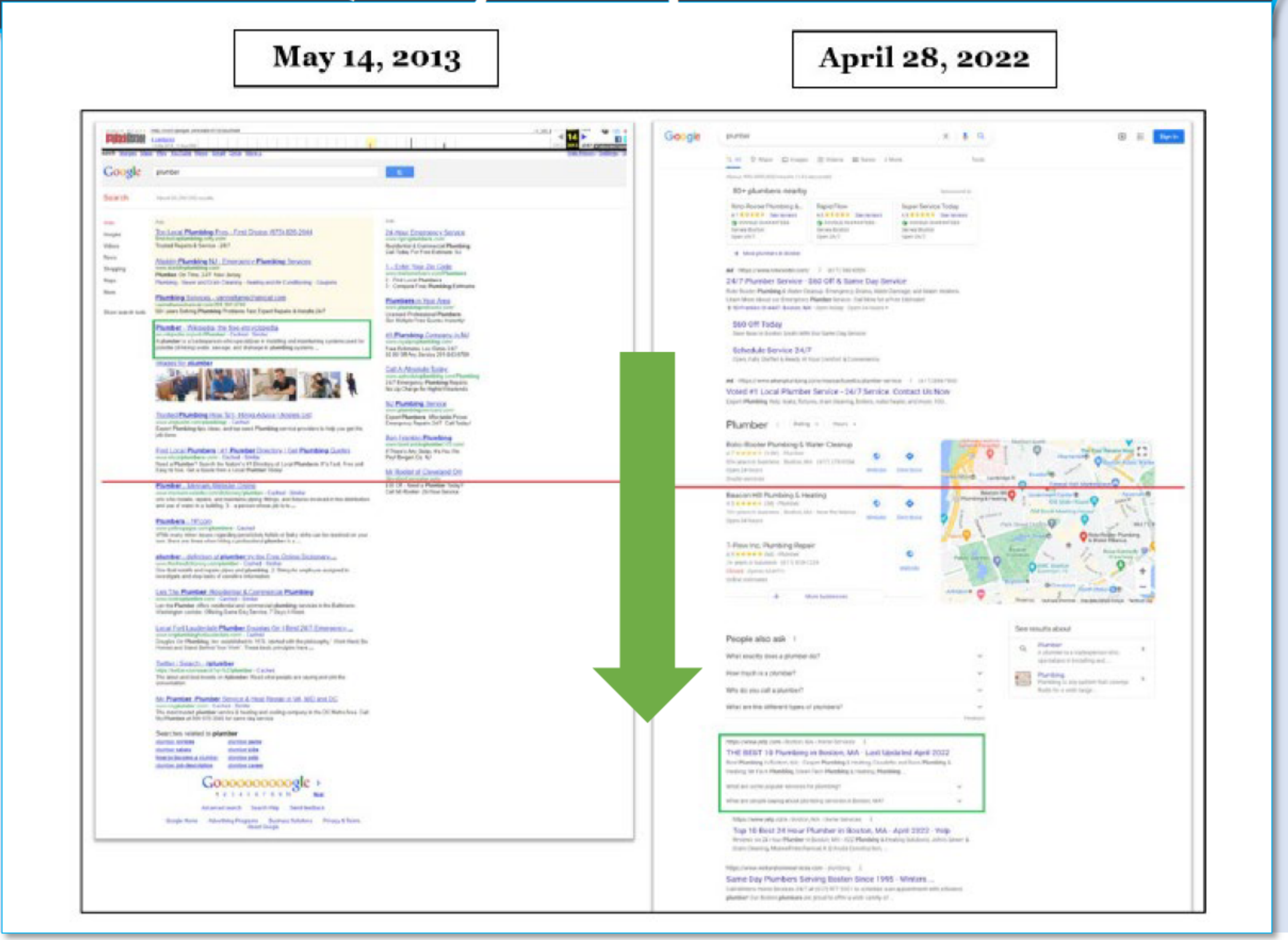
- Mr. Dijk (Booking)
- Mr. Hurst (Expedia and VRBO)
- Professor Amaldoss

All three testified that Google's practices have the effect of increasing SVP customer acquisition costs

Source: Dijk (Oct. 11, 2023) Tr, 5286:13-5288:11; 5238:22-5239:6; Hurst (Oct. 19, 2023) Tr, 6516:9-6519:16, 6521:7-6524:25; Amaldoss Report ¶¶ 163-168; Amaldoss Testimony, Slides 39-43.

Demotion of Blue Links as Google Introduces Additional SERP Features: Query for "plumber"

- "Demotion" means blue links appear lower on the SERP
- Green boxes mark the location of the first blue link
- Over time, Google has introduced more SERP features, including top text ands and universals



Note: Red line marks bottom of the desktop screen.

Source: JB1 ¶ 284, Fig 26; JB5 ¶ 59; Amaldoss Report ¶¶ 161-166.

Demotion of Blue Links Leads to Fewer User Clicks to SVP Sites

- Demotions of blue links lead to fewer clicks
- SVPs appear frequently in the blue links (e.g., relative to hotels in the travel segment)

- When SVPs are pushed down on the SERP, they are clicked on less often and less traffic is sent to SVPs

Source: JB1 ¶¶ 284-289, 291; JB2 ¶ 93; JB5 ¶¶ 59-61.

Demotion of Blue Links Leads to Fewer User Clicks to SVP Sites

- Demotions of blue links lead to fewer clicks
- SVPs appear frequently in the blue links (e.g., relative to hotels in the travel segment)
- When SVPs are pushed down on the SERP, they are clicked on less often and less traffic is sent to SVPs

- Testimony from industry witnesses
- Analysis of user clicking on blue links with and without SERP features that demote the blue links
- Analysis of text ads also indicates that position on the SERP affects frequency of clicking

Source: JB1 ¶¶ 284-289, 291; JB2 ¶ 93; JB5 ¶¶ 59-61; Dijk (Oct. 11, 2023) Tr, 5286:13-5288:11; Dacey (TripAdvisor) Deposition, pp. 262-264, 266-267; Hurst (Oct. 19, 2023) Tr, 6516:9-6519:16, 6521:7-6524:25, 6526:15-6527:3.

Demotion of Blue Links Leads to Fewer User Clicks to SVP Sites

- Demotions of blue links lead to fewer clicks
- SVPs appear frequently in the blue links (e.g., relative to hotels in the travel segment)
- When SVPs are pushed down on the SERP, they are clicked on less often and less traffic is sent to SVPs

- Testimony from industry witnesses
- Analysis of user clicking on blue links with and without SERP features that demote the blue links
- Analysis of text ads also indicates that position on the SERP affects frequency of clicking

Source: JB1 ¶¶ 284-289, 291; JB2 ¶ 93; JB5 ¶¶ 59-61; Dijk (Oct. 11, 2023) Tr, 5286:13-5288:11; Dacey (TripAdvisor) Deposition, pp. 262-264, 266-267; Hurst (Oct. 19, 2023) Tr, 6516:9-6519:16, 6521:7-6524:25, 6526:15-6527:3.

Demotion of Blue Links Leads to Fewer User Clicks

Frequency of First Clicking on a Blue Link in Visits With and Without Certain SERP Features in Commercial Only Queries, All Devices, November 6-7, 2019 & May 4 and May 6, 2021

	Percent With	Frequency of Clicking a Blue Link		
Feature	**Feature**	**Without**	**With**	**Difference**
PLA or Top Text Ad	REDACTED			
Universal				

Source: PSX00867.025 (JB1 Tbl 25 (Google Sessions Data)); JB5 Exh 10.

Demotion of Blue Links Leads to Fewer User Clicks

Frequency of First Clicking on a Blue Link in Visits With and Without Certain SERP Features in Commercial Only Queries, All Devices, November 6-7, 2019 & May 4 and May 6, 2021

	Percent With	Frequency of Clicking a Blue Link		
Feature	**Feature**	**Without**	**With**	**Difference**
PLA or Top Text Ad	[redacted]			
Universal				

Source: PSX00867.025 (JB1 Tbl 25 (Google Sessions Data)); JB5 Exh 10.

Demotion of Blue Links Leads to Fewer User Clicks to SVP Sites

- Demotions of blue links lead to fewer clicks
- SVPs appear frequently in the blue links (e.g., relative to hotels in the travel segment)

Analysis of the relative frequency with which SVPs and suppliers appear in the blue links

- When SVPs are pushed down on the SERP, they are clicked on less often and less traffic is sent to SVPs

Source: JB1 ¶¶ 284-289, 291; JB2 ¶¶ 92-93; JB5 ¶¶ 59-61; Dijk (Oct. 11, 2023) Tr, 5286:13-5288:11; Dacey (TripAdvisor) Deposition, pp. 262-264, 266-267; Hurst (Oct. 19, 2023) Tr, 6516:9-6519:16, 6521:7-6524:25, 6526:15 to 6527:3.

Frequently Occurring SVPs and Suppliers in the Travel Hotels Segment

SVPs	Suppliers
airbnb.com	bestwestern.com
hotwire.com	hyatt.com
booking.com	caesars.com
kayak.com	ihg.com
expedia.com	choicehotels.com
travelocity.com	marriott.com
hotelplanner.com	fourseasons.com
tripadvisor.com	marriottbonvoy.com
hotels.com	hilton.com
trivago.com	wyndhamhotels.com

These SVPs and suppliers appeared frequently in the top 5 blue links on Google's SERP in response to queries in the travel hotels segment.

Source: JB1 n. 125; PSX00864.002 (JB2 Tbl 2 (Google Query Data)), PSX00864.003 (JB2 Tbl 3 (Google Query Data)).

SVPs Frequently Appear in the Blue Links, Relative to Suppliers

Relative Frequency of SVP and Supplier Appearances in the Top 10 Blue Links on Google's SERP in Responses to Queries, by Segment, for Frequently Appearing SVPs and Suppliers, Feb 3, 2020 to Feb 9, 2020

		Share of Queries with At Least One Appearance on the SERP		Share of Appearances on the SERP	
Segment	Commercial Queries (in Mil)	SVP [A]	Supplier [B]	SVP [C]	Supplier [D]
Food Delivery	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
Local Services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Shopping					
Travel Flights					
Travel Hotels					

Note: Ten frequently occurring SVPs and ten frequently appearing suppliers, in each of the five segments, were identified based on the frequency with which the SVP's website name or the supplier's website name appeared in certain positions on Google's SERP in response to a search query within the segment.

Source: PSX00864.004 (JB2 Tbl 4 (Google Query Data)); JB5 Exh 18.

SVPs Understood at the Time that Their Costs of Acquiring Customers Was Going Up

Dijk (Booking) Testimony

"This document is from October 2019…. [W]e clearly were at the time very concerned with the developments of us having to pay more, more, and more for our Google clicks…. [S]o this is a document we discussed with our management team, with our board, really to see if we can find solutions. And it has proven to be very tough."

THE WITNESS: So this document is from October 2019, I believe. So this is around four years ago. And we clearly were at the time very concerned with the developments of us having to pay more, more, and more for our Google clicks, and that we became for our new customer acquisition very, very dependent on Google.

5294

And this is really the outline of this document that shows kind of how things were in 2015. Then it contrasted with how things were in 2019. And then you see that the paid placements have become far more prominent, and it means that if consumers go to a desktop or a mobile phone, the only thing they will see on the screen is an ad. You have to scroll down then to go to the natural search results.

THE COURT: Okay. So the next question is, how did Booking use this document once it was created?

THE WITNESS: Yeah, so this is a document that we discussed with our management team, with our board, really to see if we can find solutions. And it has proven to be very tough, I will be honest with you.

Source: Dijk (Oct. 11, 2023) Tr, 5293:20-5299:23 (emphasis added) [discussing the Booking analysis].

Testimony on Alternatives Available to SVPs for Obtaining Search Traffic

- Mr. Dijk (Booking)
- Mr. Hurst (Expedia and VRBO)
- Professor Amaldoss

They testified that SVPs do not have good alternatives for obtaining search traffic

Source: Dijk (Oct. 11, 2023) Tr, 5280:13-5282:6; Hurst (Oct. 19, 2023) Tr, 6515:21-6516:1, 6533:6-20; Amaldoss Report ¶¶ 94-95; Amaldoss Testimony, Slides 37-38, 44-45.

Google's Market Power in the Three Markets Has Not Been Eroded by Entry

- Entrants have substantial disadvantages to Google in both search and advertising markets from:
  - Their lack of scale and experience
  - The default to Google on its widely used Chrome browser
- Google's exclusive default agreements and its SA360-related conduct make new competition even harder

Source: JB1 ¶ 238; JB3 ¶ 110; JB5 ¶¶ 39-40.

Preinstallation Default Agreements

Low User Share Affects Rivals' Ability to Compete

- A low share makes it harder for rivals to offer high quality general search results and attractive advertising opportunities

- A low share also makes working with the general search firm less attractive to firms that can help general search firms compete: SVPs and independent search engine marketing or SEM tool providers

A rival general search firm with low share is disadvantaged in its ability to compete

Source: JB1 ¶¶ 142-146; JB3 ¶¶ 121-127, 179; JB5 ¶ 91; Barrett-Bowen (Oct. 17, 2023) Tr, 6181:7-6183:12, 6204:25-6205:21; Microsoft, "Tool Provider Strategy Refresh, Review of current market conditions, 'game theory' scenario evaluation, and Microsoft options," Feb. 18, 2019, MSFT-LIT2_0004075995, Slide 11.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Defaults Increase User Switching Costs

- General tendency of consumers to retain defaults set by others
- Google's home page study, which finds that another type of search firm default matters to search users
- Bing's higher share on Windows desktops, where Google defaults cover fewer queries
- Google's projections of substantial revenue losses were it to lose Apple and Android defaults
- Google's willingness to pay a substantial price for defaults

Source: JB3 ¶¶ 6-8; JB5 ¶¶ 87-93.

Bing's Higher Share on Windows Desktops, Where Google Defaults Cover Fewer Queries

Device Type	Bing's Share of Google and Bing Queries
Desktop, Windows non-Chrome	REDACTED [redacted]
Desktop, Windows (all)	22%
Desktop, MacOS	3%
Mobile	2%
Total	8%

On Windows desktops, Bing has a REDACTED [redacted] share of queries not made through the Chrome browser, where Google search is the default

Source: PSX00867.022 (JB1 Tbl 22 (Google Access Point Data; Google RSA Data; Microsoft Access Point Data)); JB3 n. 294.

Google Projects Substantial Revenue Losses If It Were to Lose Apple and Android Defaults

- REDACTED revenue loss on queries covered by a default agreement if Google were to lose to a rival its default position at a search access point

- Google's projections taken together with its 50% share of queries under a default agreement imply a substantial decrease in Google's query share if Google were to lose its default position to a rival

- Greater rival scale could improve rivals' quality and thereby shift an even greater share of revenues and queries to its rivals

Note: Google projected REDACTED revenue losses if it were to lose Apple defaults (in 2016) and REDACTED revenues losses if it were to lose Android defaults (in 2020), based on Google's analyses of Firefox and Apple maps defaults.

Source: JB1 ¶¶ 259, 262; JB3 ¶ 148; JB5 ¶ 89.

Increasing Scale Could Make a Big Difference to a Rival's Ability to Compete

Parakhin Testimony

A small increase in share would be more valuable to a smaller general search firm because it would allow that firm to substantially improve the quality of its results

2680

to grow in accelerated pace, even up to last percent. You know, if you have 95 percent share or 100 percent share, you probably can make twice as much money with 100 percent share than the 95.

Q. But on the search side, you don't get the same degree of incremental improvement?

A. On the quality side, it tends to moderate after about 70, 75 percent.

Q. And let's assume I'm at 20 percent or a little below it. If I increase 5 percent, is that more valuable than if I'm at 70 and I go to 75?

A. Yeah, far more valuable.

Q. Why?

A. The slope of the curve is steeper when you go lower. So, basically, each percent of share dramatically improves your results versus each percent of share when you're closer to a hundred only incrementally slightly improves results.

Q. Do algorithms for search engines improve over time?

A. Constantly.

Source: Parakhin (Sep. 26, 2023) Tr, 2680:5-17 (emphasis added).

Google's Exclusive Preinstallation Default Agreements Harmed Competition

- The exclusive defaults make it more likely that users will stick with Google
- That makes it harder for Google's rivals to compete, without a substantial countervailing benefit to consumers
- That also makes it harder for Google's rivals to work with other firms that would help them attract search users and advertisers

Source: JB1 ¶¶ 62, 256-258, 322; JB3 ¶¶ 121-127; JB5 ¶¶ 88, 91, 99.

SA360 Related Conduct

Google and Bing General Search U.S. Ad Revenue Through Major SEM Tools

Description	2016	2017	2018	2019	2020
General Search Ad Revenue: Total (in $Mil)	[redacted]				
General Search Ad Revenue: Major SEM Tools (in $Mil)					
SA360	40.7%	49.3%	60.8%	70.3%	76.0%
Skai	26.4%	26.6%	21.4%	16.1%	13.7%
Adobe	7.7%	7.6%	7.0%	6.4%	5.8%
Marin	25.2%	16.6%	10.9%	7.2%	4.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

[redacted]% of general search ad revenue on Google and Bing comes through a major SEM tool

Source: PSX00867.004 (JB1 Tbl 4 (Google QueryNav Data; Google API Rev Data; Microsoft Ad Data; Microsoft Rev Data)); JB5 Exh 7.

Share of Bing's U.S. General Search Ad Revenue Through SA360

General Search Ad Revenue	2016	2017	2018	2019	2020	2021
Total SEM Tool	REDACTED					

In 2021, REDACTED of Bing's general search ad revenue was placed through an SEM tool.

Source: PSX00867.026 (JB1 Tbl 26 (Microsoft Ad Data; Microsoft Rev Data)); JB5 Exh 8.

Share of Bing's U.S. General Search Ad Revenue Through SA360

General Search Ad Revenue	2016	2017	2018	2019	2020	2021
Total SEM Tool	REDACTED					

In 2021, REDACTED of Bing's SEM tool ad revenue was placed through SA360

Source: PSX00867.026 (JB1 Tbl 26 (Microsoft Ad Data; Microsoft Rev Data)); JB5 Exh 8.

Google's SA360-Related Conduct Contributes to Competitive Harm

- The exclusive defaults already make it harder for Google's rivals to compete in the search advertising markets

- The SA360-conduct makes it even harder for Google's ad-supported rivals, like Bing, to attract advertisers and compete for the sale of ads in the advertising markets

Source: JB1 ¶¶ 337-338; JB2 ¶¶ 131-132; JB3 ¶¶ 169, 177, 180; JB5 ¶¶ 47-49, 102.

Google Harmed Microsoft by Not Enabling Microsoft's Auction-Time Bidding on SA360

Documents and testimony indicate that:

- Advertisers value auction-time bidding
- Advertisers value Microsoft's auction-time bidding, specifically
- SA360 advertisers wanted Microsoft's auction-time bidding

The implication is that SA360 advertisers would have used Microsoft's auction-time bidding, increasing Microsoft's revenues and profits

Source: JB1 ¶¶ 310, 313, n. 454; JB3 ¶¶ 173-174; JB5 ¶¶ 45-49.

Advertisers Value Auction-Time Bidding

- Other SEM tools have implemented auction-time bidding for both Google and Microsoft
- Trial testimony from an advertiser
- Google found advertisers using its auction-time bidding typically increased their return on ad spending by 15% to 30%
- Auction-time bidding was used in roughly REDACTED [redacted] of SA360 ad spending on Google Ads

Source: JB1 ¶¶ 309-310, n. 443; JB5 ¶¶ 45-56; Booth (Oct. 11, 2023) Tr, 5157:4-5159:3; Jason Krueger (Google) Deposition, p. 53.

Advertisers Value Auction-Time Bidding

- Other SEM tools have implemented auction-time bidding for both Google and Microsoft
- Trial testimony from an advertiser
- Google found advertisers using its auction-time bidding typically increased their return on ad spending by 15% to 30%
- Auction-time bidding was used in roughly REDACTED of SA360 ad spending on Google Ads

Source: JB1 ¶¶ 309-310, n. 443; JB5 ¶¶ 45-56; Booth (Oct. 11, 2023) Tr, 5157:4-5159:3; Jason Krueger (Google) Deposition, p. 53.

Advertisers Value Auction-Time Bidding

- Other SEM tools have implemented auction-time bidding for both Google and Microsoft
- Trial testimony from an advertiser
- Google found advertisers using its auction-time bidding typically increased their return on ad spending by 15% to 30%
- Auction-time bidding was used in roughly REDACTED [redacted] of SA360 ad spending on Google Ads

Source: JB1 ¶¶ 309-310, n. 443; JB5 ¶¶ 45-56; Booth (Oct. 11, 2023) Tr, 5157:4-5159:3; Jason Krueger (Google) Deposition, p. 53.

Advertisers Value Auction-Time Bidding: Booth (Home Depot) Trial Testimony

Q What is auction-time bidding?

A So Google and Bing are sending a lot of really good information about consumers' history, right, had they gone to a competitive website looked for, let's say, ladders. And then if they go back to Google or if they go back to Bing, they can use some of that data to say, hey, this person is really prime to perform a transaction, Home Depot, you should be willing to bid more for this particular instance.

So they're using historical information on the individual, what they know about, to enrich the bidding process so that the advertiser can benefit.

Q And do you lose anything if you have a bidding strategy that does not update in real time versus if you have one that updates in real time?

A We do.

Q What do you lose?

A We found that auction-time bidding is a very productive strategy and something that I would say is probably our standard or default across most of our campaigns.

"We found that auction-time bidding is a very productive strategy and … our standard or default across most of our campaigns."

Source: Booth (Oct. 11, 2023) Tr, 5157:4-5159:3 (emphasis added).

Advertisers Value Auction-Time Bidding

- Other SEM tools have implemented auction-time bidding for both Google and Microsoft
- Trial testimony from an advertiser
- Google found advertisers using its auction-time bidding typically increased their return on ad spending by 15% to 30%
- Auction-time bidding was used in roughly REDACTED [redacted] of SA360 ad spending on Google Ads

Source: JB1 ¶¶ 309-310, n. 443; JB5 ¶¶ 45-56; Booth (Oct. 11, 2023) Tr, 5157:4-5159:3; Jason Krueger (Google) Deposition, p. 53.

Google Email on the Importance of Auction-Time Bidding

"I'm thrilled to announce that Auction-Time Bidding is now fully launched in Search Ads 360!"

"Advertisers have seen consistently strong performance improvement by enabling auction time onto their existing SA360 bid strategies. The typical range in uplift has been **+15-30%** more conversions/revenue at the same CPA/ROAS."

On Tue, Sep 1, 2020 at 2:33 PM Blake Reese <REDACTED@google.com> wrote:

Great to celebrate the fully-automated ATB momentum with SA3!

On Tue, Sep 1, 2020 at 5:15 PM Shirin Eghtesadi <REDACTED@google.com> wrote:

Thanks to all teams involved -- this has been one gigantic undertaking with great results so far and still way to go!

On Tue, Sep 1, 2020 at 1:29 PM Jason Krueger <REDACTED@google.com> wrote:

Hi Team,
I'm thrilled to announce that **Auction-Time Bidding is now fully launched in Search Ads 360!**
Summary

REDACTED

What's the feature?
SA360 Auction-time bidding enables advertisers to pass Floodlight conversion data into Google Ads to utilize auction-time bidding capabilities while maintaining cross-engine portfolio optimization. This allows advertisers to get the best performance out of both the Search Ads 360 and Google Ads platforms and **simplifies the Autobidding narrative** across products.
Performance Benefit
Advertisers have seen consistently strong performance improvement by enabling auction-time onto their existing SA360 bid strategies. The typical range in uplift has been **+15-30%** more conversions/revenue at the same CPA/ROAS.
[Launch] Myx for Shopping
While all SA360 customers have been able to utilize Auction-time bidding for Search since Q3'19, Shopping support (including Smart Shopping campaigns) has been in open beta until this past week. As of today, **all SA360 customers have access to enable Myx for Shopping campaigns!** Learn More
Myx for Budget Bid Strategies (BBS)
Advertisers can enable auction-time bidding in their automated budget plans. Since launch in May, adoption has skyrocketed from 23% to 58%! Learn More
Resources

- SA360 ATB Comm Doc: go/sa360-at-commdoc
- SA360 ATB FAQ: go/sa360-at-faqs
- SA360 ATB Best Practices: go/sa360-atb
- SA360 Smart Shopping Campaigns Comm Doc: go/sa360-SSC
- SA360 Shopping ATB Activation Troubleshooting: Dashboard

Source: Jason Krueger (Google) Deposition Exh 2, PSX00386 (GOOG-DOJ-22526606 at 607 (emphasis added)).

Advertisers Value Auction-Time Bidding

- Other SEM tools have implemented auction-time bidding for both Google and Microsoft
- Trial testimony from an advertiser
- Google found advertisers using its auction-time bidding typically increased their return on ad spending by 15% to 30%
- Auction-time bidding was used in roughly REDACTED [redacted] of SA360 ad spending on Google Ads

Source: JB1 ¶¶ 309-310, n. 443; JB5 ¶¶ 45-56; Booth (Oct. 11, 2023) Tr, 5157:4-5159:3; Jason Krueger (Google) Deposition, p. 53.

Advertisers Value Microsoft's Auction-Time Bidding, Specifically

- Skai advertisers signaled that they wanted to use Microsoft's auction-time bidding
- Skai found that using Microsoft's auction-time bidding increased sales conversions by REDACTED
- Two advertisers reported experiencing better advertising performance using auction-time bidding through Bing relative to placing ads on Bing through SA360 without auction-time bidding

Q. And the -- why was intraday bidding not as helpful to Microsoft as auction-time bidding?

A. Let me just consult with Mr. Jurata.

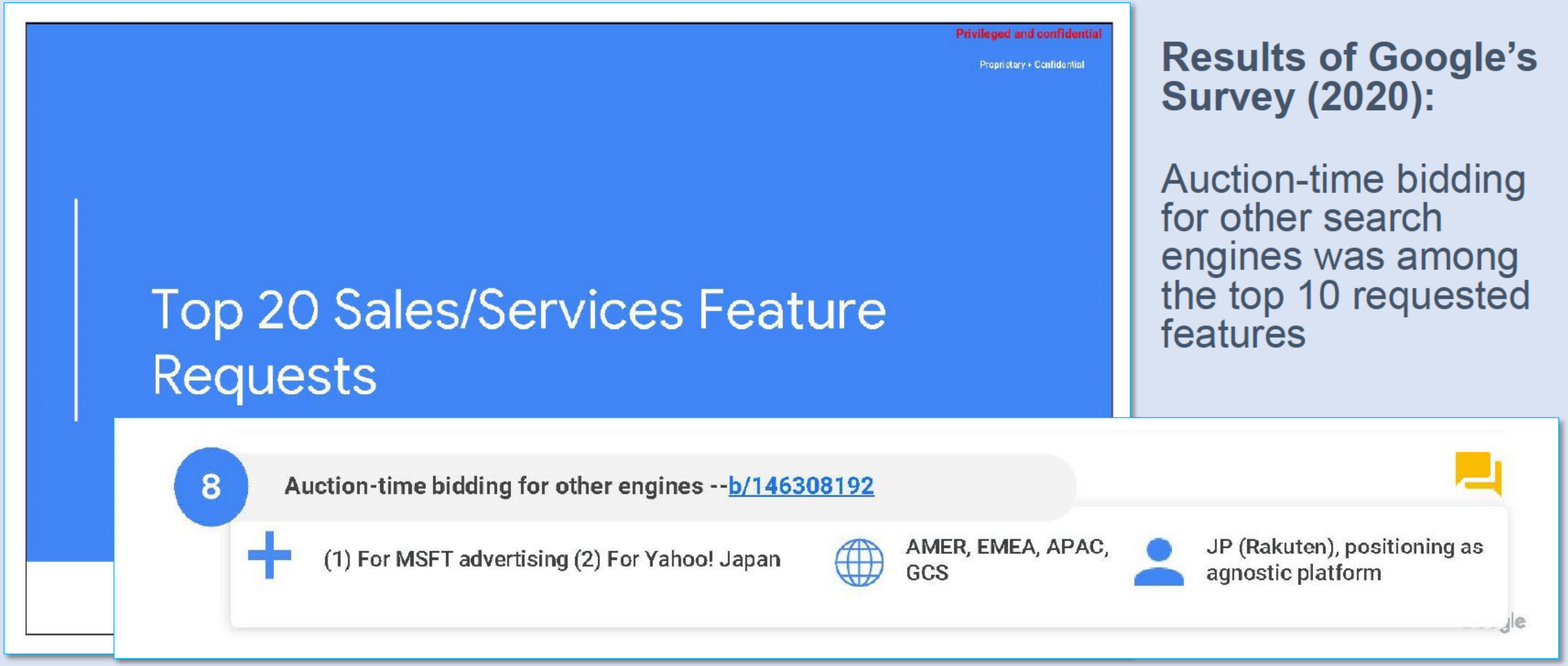
THE WITNESS: I was using some of the information of Kenshoo at the time. Is that okay to talk about that?

MR. JURATA: That's correct. That's fine to talk about that.

A. So at the time, Kenshoo also had a similar feature of intraday bidding, and when we created a similar feature of auction-time bidding, we ran for six months. And we found with Microsoft auto bidding there was a conversion lift of REDACTED So I knew -- at the time, I assumed that if with Kenshoo, we got the REDACTED lift for conversions, I would get the same with SA360. So replacing the intraday -- not replacing, but adding auto bidding to the intraday offer by SA360.

Source: Indacochea (Microsoft) Deposition, pp. 70-71 (emphasis added); JB1 n. 446.

SA360 Advertisers Wanted Microsoft's Auction-Time Bidding



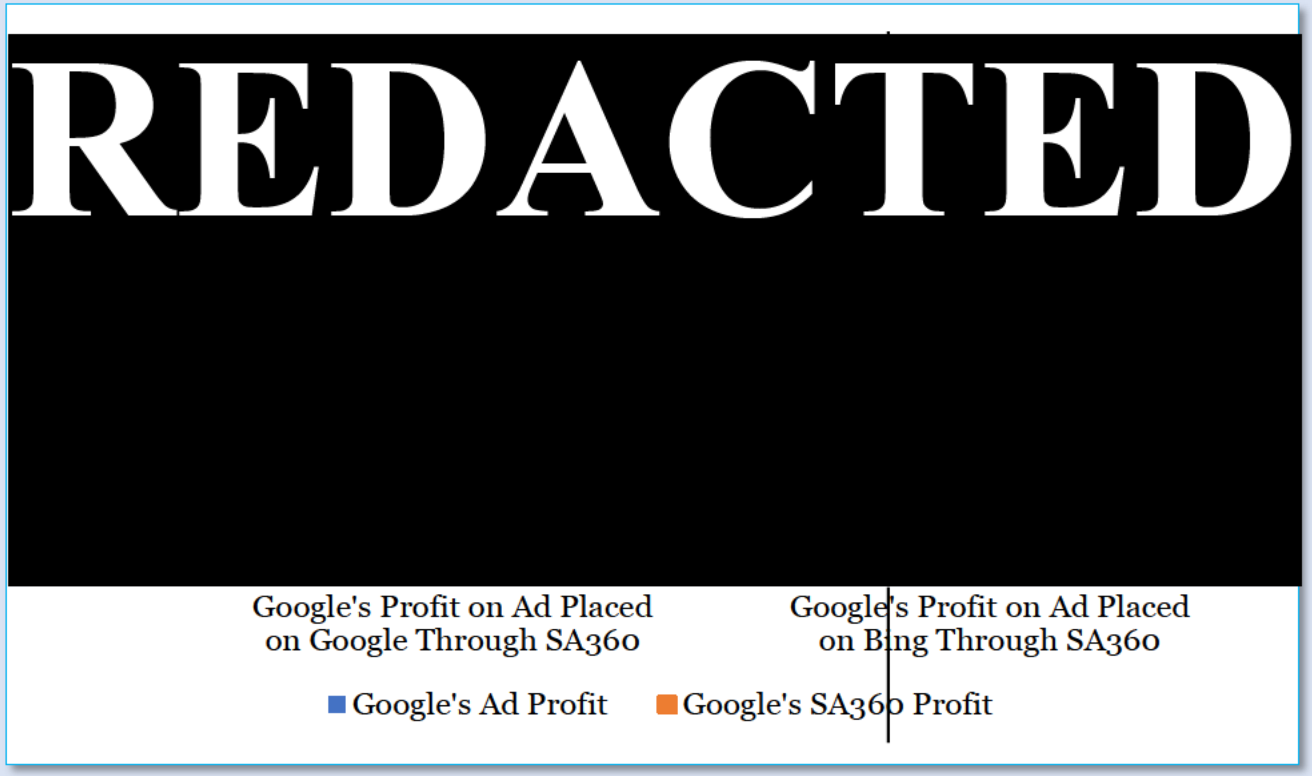
Results of Google's Survey (2020):

Auction-time bidding for other search engines was among the top 10 requested features

Source: PSX00457 (Google, "SA360 2020H2 Product Prioritization Sales & Gtech," May 8, 2020, GOOG-DOJ-24870734 at 736, 740).

Google's Profits Are Substantially Higher When It Sells a Google Ad Rather than a Bing Ad Through SA360

Illustrative example showing Google's Average Profit on \$100 Ad Placed Through SA360 on Google Versus on Bing



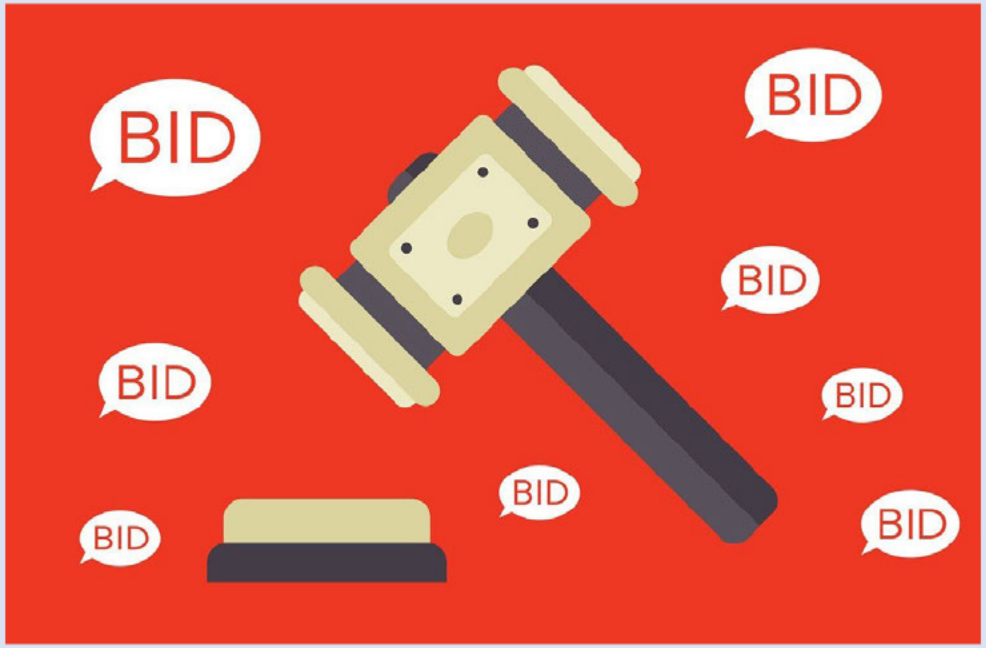
Notes:

1. Google's average profit on a \$100 ad would be around REDACTED
2. Google's average SA360 fee was REDACTED of revenues placed through SA360 in 2017 and 2018, respectively. Thus, Google would charge about a REDACTED commission on a \$100 ad placed through SA360.

Source: PSX00864.006 (JB2 Tbl 6 & n. 2; JB5 ¶ 51.

Ad Prices on Google Would Tend to Decrease

- Less bidding for ads on Google would reduce auction pressure and tend to decrease prices for Google ads



Because Google sells so much advertising, even a small decrease in ad prices could be very costly to Google

Source: JB1 ¶¶ 228-229; JB2 ¶¶ 115-119; JB3 ¶ 186; JB5 ¶¶ 52, 107; Roszak (Sep. 19, 2023) Tr, 1552:5-1554:18.

Microsoft's Estimates of Revenue Because of Google's SA360-related Conduct

- Conducted studies in 2020 and 2021
- Found a revenue loss in the range of REDACTED million per year

Microsoft's conclusion that the revenue loss was substantial is consistent with advertisers valuing auction-time bidding

Source: JB1 n. 454; Utter (Microsoft) Deposition, pp. 178-186, Exh 12; Heath (Microsoft) Deposition, pp. 120-131, Exhs 8-9; Microsoft, "SA360 Commercial Agreement Opportunity Size – AB Feature Support," Mar. 8, 2021, MSFT-LIT-0000004236.

Costs of Switching from SA360 to Other SEM Tools

- Time consuming because a transition to other SEM tools could take months to a year
- Requires leaving behind its accumulated learning about advertising strategy or paying to run both tools simultaneously
- An SA360 advertiser that switches to another SEM tool, like Skai, may not be able to use all of Google's capabilities as effectively, and it may pay more

Source: JB1 ¶¶ 116, 312, n. 450; JB5 ¶ 50; Booth (Home Depot) Deposition, pp. 131-132; Booth (Oct. 11, 2023) Tr, 5161:10-5164:18; Vallez (Oct. 19, 2023) Tr, 6635:16-6636:14.

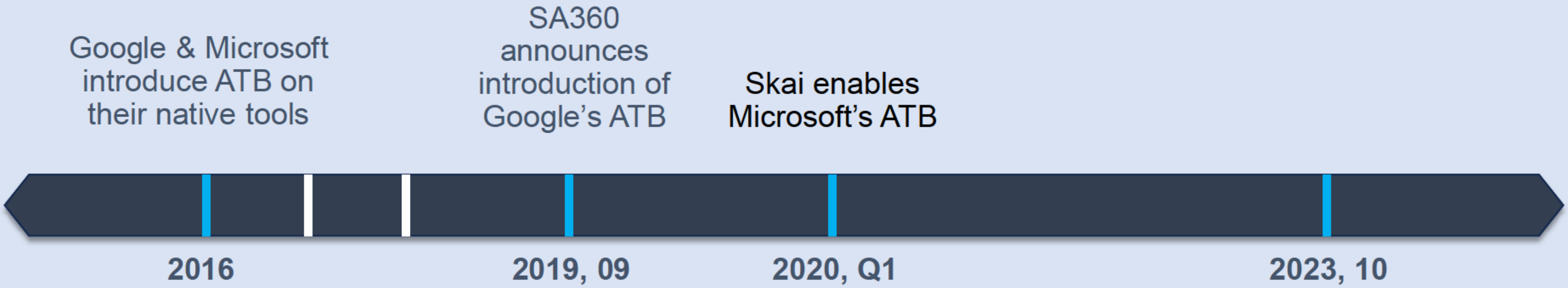
Consequences of Google's SA360-Related Conduct for Advertisers as a Whole

Google's conduct discouraged competition in the advertising markets

All advertisers were harmed because greater competition would tend to lower advertising prices to all advertisers, not just SA360 advertisers

Source: JB1 ¶¶ 334-344, n. 471; JB2 ¶ 115-119; JB3 ¶¶ 183-86, 195, n. 551; JB5 ¶¶ 51-55.

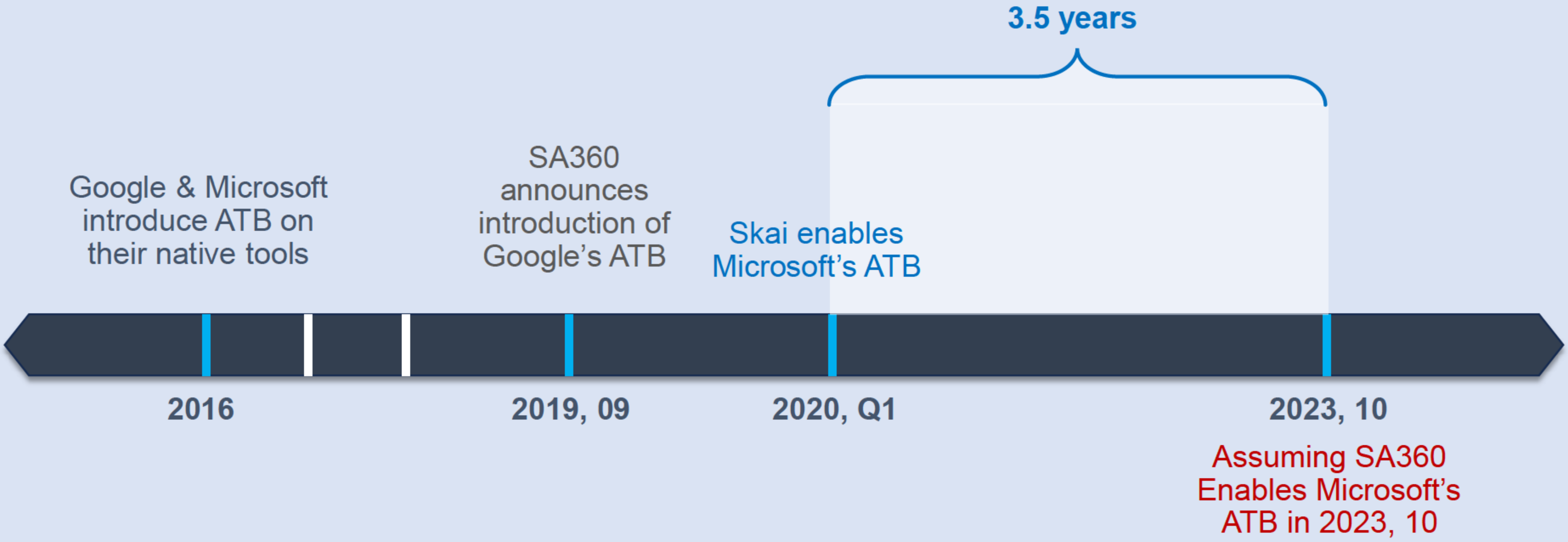
Auction-Time Bidding Chronology Suggests a Benchmark



Note: Many SA360 advertisers had access to Google's ATB while it was being tested before September 2019.

Source: Plaintiff States' Statement of Material Facts, ¶ 108; Google's Statement of Material Facts, ¶¶ 282, 294-295, 301; Varia (Oct. 6, 2023) Tr, 4691:21-4692:23; Vallez (Oct. 19, 2023) Tr, 6639:15-6641:5.

Using Skai's Introduction of Microsoft's Auction-Time Bidding as a Benchmark



Note: Many SA360 advertisers had access to Google's ATB while it was being tested before September 2019.

Source: Plaintiff States' Statement of Material Facts, ¶ 108; Google's Statement of Material Facts, ¶¶ 282, 294-295, 301; Varia (Oct. 6, 2023) Tr, 4691:21-4692:23; Vallez (Oct. 19, 2023) Tr, 6639:15-6641:5.

Google's Opening Statement on SA360

Colorado Plaintiffs' Expert – Professor Baker

- No opinion that SA360 has market power in any market
- No analysis of what percentage of advertisers only use SA360 to buy search ads
- No analysis of cost of switching from SA360 to Bing Ads native tools
- No independent analysis of whether Bing Ads lost ad spend due to delayed feature implementation on SA360
- No opinion that Google's SA360 conduct has impacted ad auction pricing or overall search advertising output

Google
63

Source: Google Opening Statement, Sep. 12, 2023, Case Nos. 1:20-cv-03010 (APM)& 1:20-cv-03715 (APM), Slide 63.

Large Advertisers Prefer SEM Tools to Native Tools

Source: Heath (Microsoft) Deposition Exhibit 3, PSX00789 (MSFT-LIT2_0003855627 at 632 (emphasis added)).

Harm to Competition

Effect of Google's Exclusive Defaults on Its Ability to Engage in the SA360-Related Conduct

The defaults protect Google's scale advantage in general search services

→

- Advertising on Google's rivals is less attractive
- Google is less likely to lose advertisers if SA360 does not support certain Microsoft Ad features

→

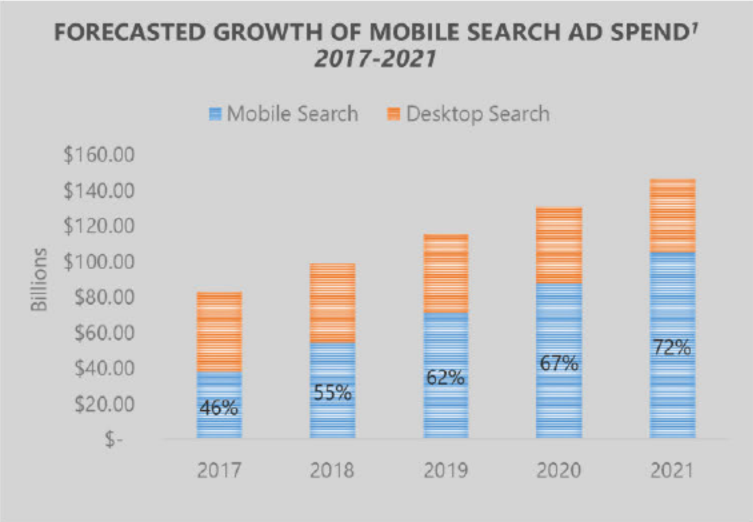
It is less costly for Google to engage in the SA360-related conduct

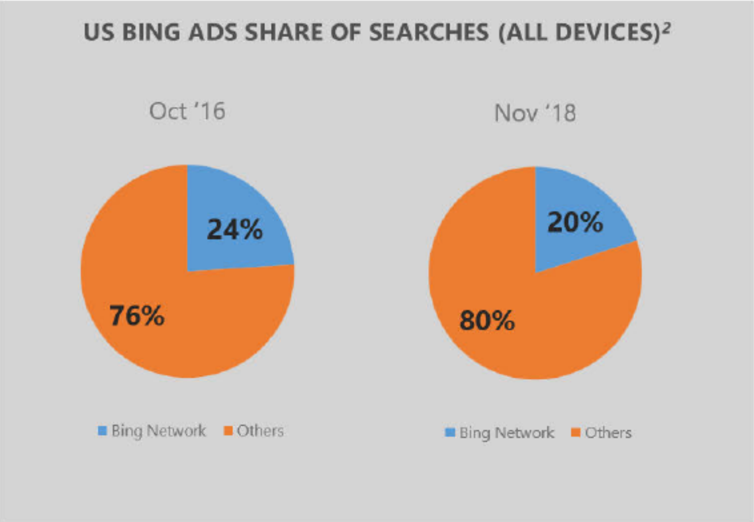
Source: JB3 ¶¶ 23, 114-115, 168, 180; JB5 ¶¶ 101-102; Microsoft, "Tool Provider Strategy Refresh, Review of current market conditions, 'game theory' scenario evaluation, and Microsoft options," Feb. 18, 2019, MSFT-LIT2_0004075995, Slide 11.

Microsoft Strategy Document on SEM Tool Provider Incentives to Enable Microsoft Ad Features (2019)

Low Bing Ads market share minimizes relevancy to TPs

Competition for TP prioritization is increasingly challenged. Bing shrinking market share as mobile dominates search. Increased demands from FB and Amazon integration in TP platforms.





[1]eMarketer Digital Ad Spending Worldwide, by Device and Format, 2017-2021; [2] comScore

Microsoft Restricted – Internal Only

Bing's low share in ad markets, especially on mobile, "minimizes" Microsoft's relevance for SEM tool providers ("TP")

Source: Microsoft, "Tool Provider Strategy Refresh, Review of current market conditions, 'game theory' scenario evaluation, and Microsoft options," Feb. 18, 2019, PSX01117 (MSFT-LIT2_0004075995, Slide 11 (emphasis added)).

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services
- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition
- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality
- Evidence that, with greater competition, search users who value privacy would have had more choices

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21.

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services
- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition
- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality
- Evidence that, with greater competition, search users who value privacy would have had more choices

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21.

Google Faces More Competition from a Regional Rival in Several Countries: “[C]hallenged [M]arkets” (2009)

❶ *Scope & objective*

What we are aiming to achieve

Google

Situation

- Most Search markets are structured as a duopoly with one strong leader, a follower, and a tail of small players
- Google is not the Search leader in 5 major countries*
- We have been pushing to win in these markets with mixed results

Scope

- Four of these markets (Japan, China, Russia, Czech) face common challenges; they are in scope for our 'challenged markets' approach
- South Korea presents a range of radically different challenges; the approach discussed today will help but will not be sufficient**

Goal

- Become users' #1 choice in Search in Japan, China, Russia & Czech
- Support this by becoming the first Search advertising choice for advertisers, partners and agencies

Objectives for OC discussion — Discuss a cross-functional approach to succeed in the long-term & agree on next steps

* Challenged markets: Czech Republic, Russia, China, Japan, South Korea
** The overall approach does not cover South Korea, however the Product approach described applies to this country

Google Confidential and Proprietary

- Japan
- China
- Russia
- Czech Republic

Source: PSX00331 (Google, “Framework Approach for Challenged Markets,” Dec. 2, 2009, GOOG-DOJ-16782379 at 81 (emphasis added)).

Google Describes Its Main Competitors in Four of Its “[C]hallenged [M]arkets” as Having a “[H]igh [S]hare”

Where we are today

Our competitors have high share and differ in models Google

	Japan	China	Russia	Czech
Search query share				
• Google	41%	20%	31%	36%
– Organic	30%	7%	31% (Google.ru + distribution)	35%
– Distribution	8%	11%		0% TBC
– Syndication	3% (Biglobe, Goo, Livedoor)	2% (Kijiji)	0%	1% (Centrum)
• Main competitor	54%	75%	66%	59%
– Organic	52% (Yahoo!/Overture)	31% (Baidu.cn)	58% (Yandex.ru)	53% (Seznam.cz)
– Syndication	2% (Nifty, Infoseek)	44%	8% (Mail.ru)	6% (Zboz: 5%, Firmy: 1%)
• Other players	5%	5%	3%	5%
Leading model				
• Main competitor	Yahoo!	Baidu	Yandex	Seznam
• UX model	Portal	Search engine	Search with rich homepage	Portal
• Products strengths	Search, email, IM, ISP, auction, news, maps	Search, music search, posBas (Q&A), map	Maps (traffic data, street view), product search, music	Search, Mail, Video, Maps

Homepage UI

• Main competitor

• Google

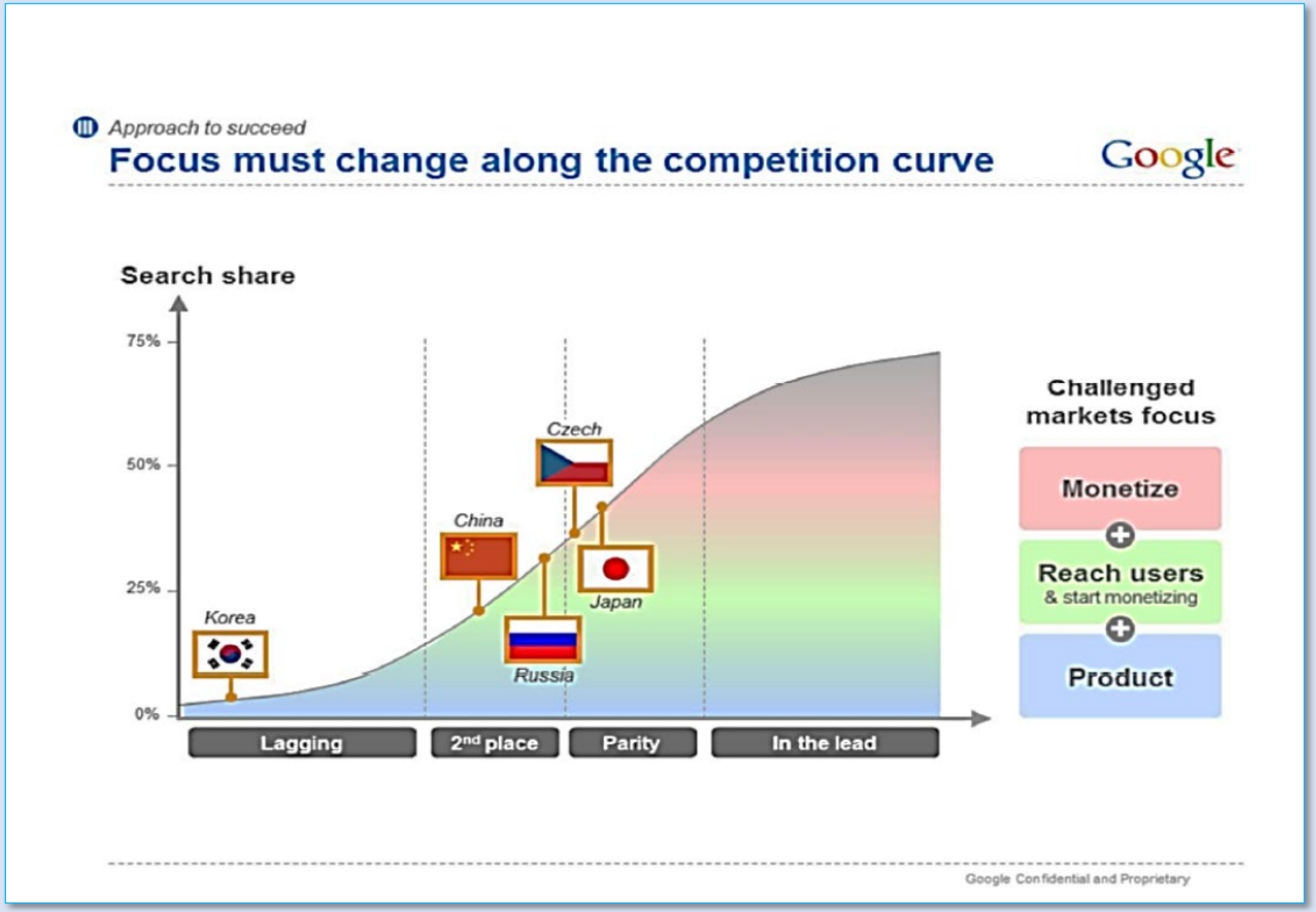
Google Confidential and Proprietary

Google’s Share in General Search Services < 50%:

- Google’s share ranges from 20% to 41%
- Main competitors’ shares range from 54% to 75%

Source: PSX00331 (Google, “Framework Approach for Challenged Markets,” Dec. 2, 2009, GOOG-DOJ-16782379 at 82 (emphasis added)).

Google Describes the Four "[C]hallenged [M]arkets" Along a "[C]ompetition [C]urve"

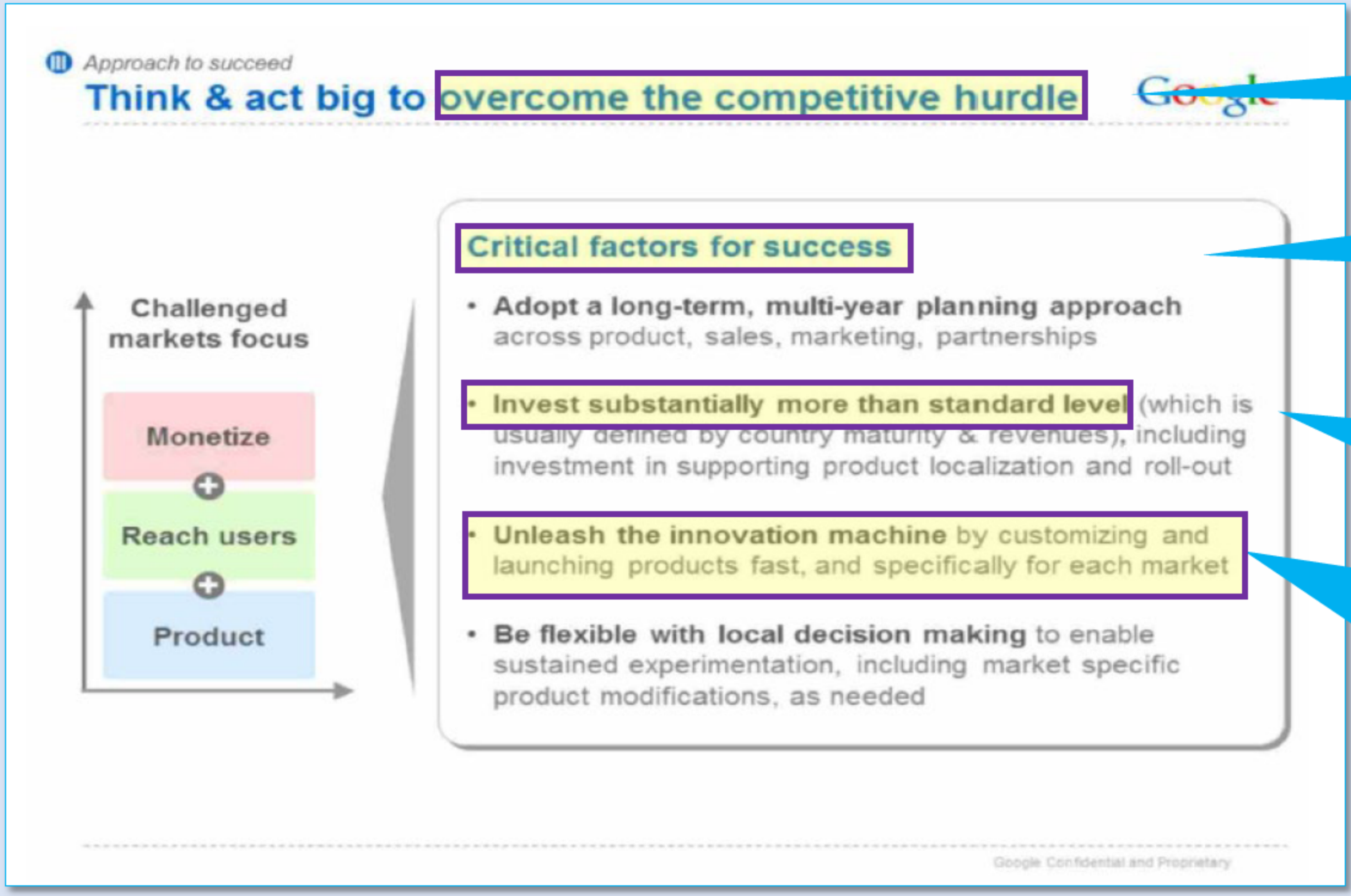


Google's position, relative to its main rival:

- 2nd place in China and Russia
- Parity in Japan and the Czech Republic

Source: PSX00331 (Google, "Framework Approach for Challenged Markets," Dec. 2, 2009, GOOG-DOJ-16782379 at 86).

Google's Analysis of Its "[C]hallenged [M]arkets" Illustrates a More General Economic Point



"overcome the competitive hurdle"

"Critical factors for success"

"Invest substantially more than standard level"

"**Unleash the innovation machine** by customizing and launching products fast, and specifically for each market"

Source: PSX00331 (Google, "Framework Approach for Challenged Markets," Dec. 2, 2009, GOOG-DOJ-16782379 at 87 (emphasis added)).

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services
- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition
- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality
- Evidence that, with greater competition, search users who value privacy would have had more choices

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21.

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services

- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition

- Evidence that with more competition, general search firms would have used r

- Evider privacy would have had more choices

Microsoft compared Google's search result quality in countries where Google faced a rival in general search with a more significant share, with Google's search result quality in countries where it did not

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21.

Microsoft's Analysis of Google's Search Results Quality Across Countries

- Microsoft found that Google's search result quality was higher in countries where Google had a rival with a more significant share
- Google has higher quality search results in countries where it provides more country-specific local information like restaurant hours and menus or good local maps

Source: JB3 ¶ 182; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Interview with Mikhail Parakhin (Microsoft), Sep. 16, 2022.

Microsoft's Analysis of Google's Search Results Quality Across Countries

- Microsoft found that Google's search result quality was higher in countries where Google had a rival with a more significant share
- Google has higher quality search results in countries where it provides more country-specific local information like restaurant hours and menus or good local maps

- Google has a greater incentive to compete by investing in search result quality when it faces greater competition

Source: JB3 ¶ 182; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Interview with Mikhail Parakhin (Microsoft), Sep. 16, 2022.

Google and Its Rivals Would Have Competed More in a More Competitive World

Google's Rivals:

Improved prospects for success would have increased incentives to invest in new and better products

Google:

Fear of falling behind would have increased Google's incentive to invest

Both Google and its rivals would have had greater incentives to invest

Source: JB1 ¶¶ 341-342; JB3 ¶¶ 110, 194, 200; JB5 ¶¶ 106.

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services
- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition
- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality
- Evidence that, with greater competition, search users who value privacy would have had more choices

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21.

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services
- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition
- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality
- Evidence that, with greater competition, search users who value privacy wou

Evidence from Google and evidence from Bing

Source: JB3 ¶¶ 182, 190; JB5 ¶¶ 75-82,106-109; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21; Richard (Yelp) Mar. 3, 2022 Deposition, pp. 43-47; GOOG-DOJ-30406618; GOOG-DOJ-16070848; GOOG-DOJ-03521263.

Google Recognizes Revenue Risk from Rival Investments in Japan (2021)

Japan is facing the perfect storm of user and market headwinds

1. Largest iOS market globally with high dependence on Safari for Search DAU, putting revenue at risk [Link]
2. Y!JP stronger at meeting user's Daily Information Needs (i.e., DIN in Weather, News etc.) and is preferred on Desktop [Link]
3. Growing desire for passive exploration and hyperlocal/UGC combined with a flourishing super/vertical app ecosystem is waning engagement, touchpoints, and overall mindshare [Link]
4. Line/YJP (+ Naver) is creating a closed ecosystem and accelerating investments in highly commercial verticals (Local, Shopping), putting revenue at further risk [Link]

Google

Source: UPX0789 (Google, "Japan, 2021," Jun. 2021, GOOG-DOJ-30406618 at 24 (emphasis added)).

Google Identifies Responses that Include Making Multi-Year Product Bets in Japan (2021)

Strategy overview

What does it take to win in Japan?

2-parts:

1. **Address revenue risk** and identify **mitigation strategies for Y!JP and NAVER actions** related to enabling and expanding Search and Ads coverage
   Goal: Preserve Existing Footprint

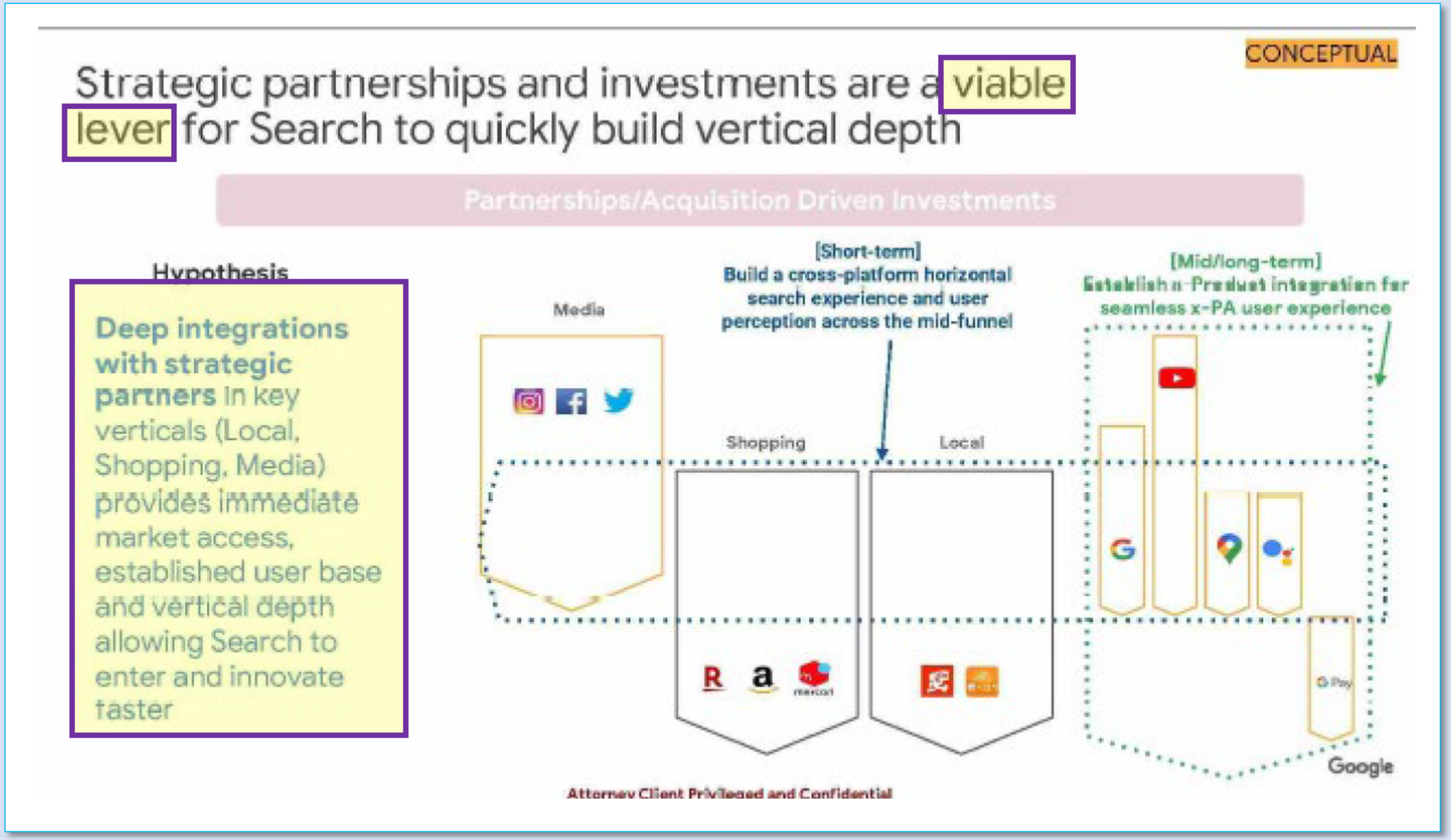
2. **Multi-year JP focused product bets** both within and across Search properties to **drive purposeful search**, **acquire new browse-first users**, and **build cohesive shopping journeys**
   Goal: Expand Footprint via Acquisition Headroom

Google

Attorney Client Privileged and Confidential

Source: UPX0789 (Google, "Japan, 2021," Jun. 2021, GOOG-DOJ-30406618 at 27 (emphasis added)).

Google Identifies Strategic Partnerships as a "[V]iable [L]ever" to Compete More Effectively in Japan (2021)



Shopping panel icons:

Rakuten

Amazon

Mercari

Source: UPX0789 (Google, "Japan, 2021," Jun. 2021, GOOG-DOJ-30406618 at 76 (emphasis added (orange highlight in original))).

Bing Needs Partners to Improve Search Result Quality, Especially in Travel and Local, Because of Its Small Scale

Testimony from a Microsoft Executive

Partnerships provide "content so that the quality of the answer is such that we're hopefully at a level of quality that is similar to our competitors" because "mobile data is pretty critical for the categories of local and also travel and mapping as well" but we are "not having access to the mobile device."

Q. And why does Microsoft seek this content from content providers instead of getting it itself?

A. So, we don't have the depth or the expertise or the resources to be able to get access to the depth of information that goes across the local and travel categories and also mapping as well. We just don't have -- it's not a specialty either for Microsoft or for Bing. So we want to leverage partners to pull that in.

THE COURT: Could you restate that last part again.

THE WITNESS: Yeah. So it's not an area of expertise for us. And so by using partners who have that expertise, it provides us with the ability to leverage those partners and provide an answer which is -- which is of use.

BY MR. SALLET:

Q. Could Microsoft just crawl the open web and collect this information?

A. Yeah, absolutely. So there is the ability to crawl and just -- that is a way in which we do source information. The challenge with it is, it's expensive, but also, we can't get access to a lot of the data, and a lot of the data has constraints written in with it. So it is a form of getting access to data.

But typically, the data that's probably the most important to a user are things that are what we call rich types of data, which are not just the name, the telephone number, and maybe the address, but things like the opening hours, which I mentioned before, you know, photos or reviews.

So that's very difficult to get through crawling, and there are -- there is the ability for companies to opt out of Bing crawl. So there are certain restrictions sometimes in terms of getting a complete picture in terms of the answer that we're providing.

Q. In your experience, Mr. Barrett-Bowen, can these content partnerships play any role in helping Bing compete against Google?

A. So my role is to acquire content so that the quality of the answer is such that we're hopefully at a level of quality that is similar to our competitors. And so what we're trying to achieve is providing an answer to a user that will satisfy them in terms of the question they've asked, but equally provide the trust and give them the layer of trust so they will come back and use us again.

Q. In terms of going back to travel content, if we might, in your experience, is having mobile data important to respond to certain kinds of travel queries?

A. So mobile data is pretty critical for the categories of local and also travel and mapping as well. I mean, the whole three rely on mobile. And the rationale for that is that if you have your mobile, you're much more likely to capture data by -- you know, if you're in the restaurant, you write the review or you take a photo. If you're -- and so having the mobile signal, having a mobile device provides us -- would provide us with data.

So by not having access to the mobile device and that platform, it makes it more challenging for us to source the data.

Q. Could you take a moment and explain what you mean when you say not have access to the mobile device?

A. So in terms of as a user using our service on mobile.

Source: Barrett-Bowen (Oct. 17, 2023) Tr, 6173:19-6177:21 (emphasis added); Nadella (Oct. 2, 2023) Tr, 3495:16-3496:16.

Bing's Small Scale Limits the Value It Can Bring to Partnerships Because It Offers Partners Limited Traffic

Testimony from a Microsoft Executive

Q. And thinking about these specifics -- and feel free to address some of them, if you wish -- do you have a view as to whether Microsoft's lack of traffic has made it more difficult to enter into these content partnerships?

A. Yeah, I mean, so again, not trying to -- it's hard to read the tea leaves, but again, the more traffic you have, the more you have to offer the partner, and so the more the partner's interested in doing a deal with you. And I think that's a logical conclusion.

"[T]he more traffic you have, the more you have to offer the partner, and so the more the partner's interested in doing a deal with you."

Testimony from an Expedia Executive

Q. And Expedia Group does participate in Bing's hotels unit,

6566

which they may call The Answer; correct?

A. I've never talked about Bing's hotels unit. So if you've seen it in their -- if you've seen it online, they do.

The amount of time I spent talking to Bing in my career was zero. Whereas, with Google, it would have been every month and every quarter.

"The amount of time I spent talking with Bing in my career was zero. Whereas, with Google it would have been every month and every quarter"

Testimony from a Booking Executive

Q. Is Booking.com able to look to other general search firms such as Bing as viable marketing alternatives to Google?

A. I would say no.

Q. And why is that?

A. Because the scale is kind of too small. So even if Bing

5282

would be far cheaper, it would really not work for us, because we really don't get the scale that we need.

"So even if Bing would be far cheaper, it would really not work for us, because we really don't get the scale we need."

Source: Barrett-Bowen (Oct. 17, 2023) Tr, 6205:13-21 (emphasis added); Hurst (Oct. 19, 2023) Tr, 6565:25-6566:6 (emphasis added); Dijk (Oct. 11, 2023) Tr, 5281:21-5282:2 (emphasis added).

Bing's Small Scale Has Been an Impediment to Partnerships

Bing's limited scale impeded, e.g.:

- Reaching a partnership with Hopper
- Reaching a partnership with REDACTED partner
- Continuing its partnership with Yelp

Source: Barret-Bowen (Oct. 17, 2023) Tr, 6188:1-10 (Hopper), 6189:24-6190:12REDACTED and 6204:1-17 (Yelp); Stoppelman (Yelp) Deposition, pp. 215-216; JB3 ¶ 179.

Bing-Yelp Partnership Fails in Part Because of Bing's Small Scale

- Bing and Yelp had a traffic-for-data partnership for 7 years, from 2012 to 2019
- Yelp had local services data, brand recognition, many loyal customers, and a reputation for trustworthiness—all of which were valuable to Bing
- REDACTED

Source: JB3 ¶ 179; JB5 ¶ 108; Barrett-Bowen (Oct. 17, 2023) Tr, 6182:14-21; 6198:22-6202:14; 6208:3-5.

Greater Competition Would Tend to Improve the Quality of General Search Services

- Google analysis indicating that with greater competition, Google would have an incentive to invest more in general search services

- Testimony about Microsoft analyses indicating that Google's search result quality is greater in countries where Google faces more competition

- Evidence that with more competition, general search firms would have used more SVP partnerships to improve search result quality

- Evidence that, with greater competition, search users who value privacy would have had more choices

Source: JB3 ¶ 179; JB5 ¶ 108; Parakhin (Sep. 27, 2023) Tr, 2718:5-2719:24; Barrett-Bowen (Oct. 17, 2023) Tr, 6182:5-21; 6201:24-6202:20; 6208:3-5.

Apple and DuckDuckGo Fail to Reach Agreement in Part Because of Apple's Exclusive Default with Google

Google's Exclusive Default with Apple Limits Choices Available to Search Users Interested in Privacy

- DuckDuckGo is a privacy-focused search firm
- It talked with Apple about becoming the default search engine for private browsing on Apple's Safari browser
- They did not reach an agreement, in part because of Apple's exclusive pre-installation default agreement with Google

Source: JB3 ¶ 190; JB5 ¶ 108; Weinberg (Sep. 21, 2023) Tr, 1972:16-1973:11, 1985:5-14, 1987:15-1989:12, 2031:13-16, 2045:25-2049:24.

Greater Competition Would Tend to Lower Advertising Prices

- Prediction of economic theory
- Google's analysis of general search advertising prices in Japan

Source: JB3 ¶¶ 45, 186; JB5 ¶ 107; Google, "Japan RPM," Apr. 24, 2017, GOOG-DOJ-16070848.

Regulatory Environment in Japan

- Yahoo! Japan is Google's primary rival in Japan
- Yahoo! Japan is an independent company from the U.S. search firm Yahoo!
- It gets search results from Google, so the blue links are the same quality as Google's
- Google operates Yahoo! Japan's advertising platform
- The Japan Fair Trade Commission requires Google to operate Yahoo! Japan's advertising platform independently from Google's own advertising business

Google and Yahoo! Japan have parity in search result quality

Google and Yahoo! Japan compete to sell ads

Source: JB3 ¶¶ 184-185; JB5 ¶ 107.

Regulatory Environment in Japan

- Yahoo! Japan is Google's primary rival in Japan
- Yahoo! Japan is an independent company from the U.S. search firm Yahoo!
- It gets search results from Google, so the blue links are the same quality as Google's
- Google operates Yahoo! Japan's advertising platform
- The Japan Fair Trade Commission requires Google to operate Yahoo! Japan's advertising platform independently from Google's own advertising business

Google and Yahoo! Japan have parity in search result quality

Google and Yahoo! Japan compete to sell ads

The regulatory scheme simulates the result of more competition in general search services because competition would make search quality parity possible and more likely

Source: JB3 ¶¶ 184-187; JB5 ¶ 107.

Consequences of Greater Competition in General Search Services for Competition in General Search Advertising

- When general search firms become more attractive to search users, they become more attractive to advertisers

- More competition in general search services is likely to lead to more competition in general search advertising

Source: JB3 ¶¶ 186, 195; JB5 ¶¶ 107, 109.

Effect of Greater Advertising Competition on Ad Prices in Japan (2017)

On Mon, Apr 24, 2017 at 5:57 PM, Tomonori Sakai <REDACTED@google.com> wrote:

Hi Mike,
To add to Evan's comment which I echo (thank you very much Evan!), I'd highlight the competitive situation in JP.

- JP is unique among our major countries in a sense that we have a player who competes against us head-to-head, Y!J (even though we surpassed Y!J in search revenue ~2 years ago). Advertisers split their search budget to Y!J and Google, which makes the auction pressure on Google less.
- So I don't think it's much apple-to-apple to compare RPM in JP against RPM in US/UK where we don't have competitors like Y!J, and I've rather compared our RPM against Y!J's (even though we need to make lots of assumptions to estimate it). And I believe our RPM surpassed Y!J's a few years ago on smartphones.

Another possible factor behind why the absolute mobile RPMs are lower than in other countries is that JP advertisers may value online less compared with those in US/UK. Online share of wallet in the ads market is 23% in JP while it's 35% in US and 56% in UK (2016).

Tomo

On Tue, Apr 25, 2017 at 2:05 AM, Mike Roszak <REDACTED@google.com>

Hi Tomo and Evan-
During a chat with the Search team, we showed them some RPMs by country and there were questions about why Japan RPMs were so much lower relative to US and UK (table below). We have some theories around Y! Japan reducing auction pressure, higher mobile share in JP, and relative size of ecommerce market, but welcome any thoughts from your local expertise!

Thanks,
Mike

"I'd highlight the competitive situation in [Japan]"

"Advertisers split their search budgets to Y!J and Google, which makes auction pressure on Google less"

"Japan RPMs were so much lower relative to US and UK"

Source: PSX00317 (Google, "Japan RPM," Apr. 24, 2017, GOOG-DOJ-16070848 (emphasis added)); Roszak (Sep. 19, 2023) Tr, 1550:1-1556:21.

A More Competitive World vs. the Actual World

In the actual world:	In a world without Google's conduct:
• Google has substantial market power	• Google's market power would have been easier to erode
• Google's conduct has lessened the incentive and ability of all its rivals, including potential entrants, to compete	• Google's rivals would have had a greater incentive and ability to compete in search and search advertising markets

↓

- Higher quality general search services
- Lower ad prices

Source: JB1 ¶¶ 41, 68, 238; JB3 ¶¶ 3,186-187, 200; JB5 ¶¶ 35, 40,106-110.

A More Competitive World

- Greater incentives for all general search firms to improve products, bring new products to market, and sell products at prices that are in line with costs
- Greater incentives for SVPs, independent SEM tool providers, and the search access providers that sell exclusive defaults to work with Google's rivals

- More competitive market outcomes
  - Greater quality and more choices for search users and advertisers
  - Reduced quality-adjusted prices for advertisers and potentially search users

Source: JB3 ¶¶ 186-189, 192, 200; JB5 ¶¶ 106-110.

Overall Conclusions

- Google has substantial market power in the U.S. markets for general search services, general search text advertising, and general search advertising
- Google's exclusive preinstallation default agreements and SA360-related conduct lessened the incentive and ability of all its rivals and potential rivals to compete
  - Each makes it easier for Google to engage in the other
- Google's conduct did not generate a substantial countervailing competitive benefit in any of the three markets
- The potential for the erosion of Google's market power was reduced in all three markets
- General search users and general search advertisers were harmed

Source: JB3 ¶ 36, 44; JB5 ¶¶ 11, 40, 44, 101, 105, 109.