

Direct Testimony of Prof. Michael D. Whinston

U.S., et al. v. Google LLC

United States District Court for the District of Columbia

October 5, 2023

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Ex. No.
UPXD102
1:20-cv-03010-APM

- Determine whether general search services, general search text advertising, and search advertising in the United States are relevant antitrust markets for the purpose of evaluating Google's market power in this case
- Assess whether in recent years Google has possessed market power in those markets and, if so, assess the extent of Google's market power

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1. General search services, general search text advertising, and search advertising in the United States are relevant markets
2. Google possesses substantial market power protected by barriers to entry in each of the relevant markets

Opinion 1

General search services, general search text advertising, and search advertising in the United States are relevant markets

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Relevant Market

General Search Services

General Search Text Advertising

Search Advertising

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Trial testimony shows that general search services is a relevant market

Q. And users, when they put something in the URL bar of Safari, they have an expectation that its going to go to a general search engine?

A. Yes.

John Giannandrea, Senior VP of Machine Learning and AI Strategy



Q. And who does DuckDuckGo consider to be its search engine competitors?

A. Really most of our users switch from Google. So like far and away, we consider Google just our competitor. Other search engines that compete with us are Bing, Yahoo!, Ecosia, and Brave are probably the main ones in the U.S.

...

Q. Does DuckDuckGo consider vertical search engines such as Amazon to be competitors that users are likely to switch to or from?

A. No, not really.

Gabriel Weinberg, CEO & Founder



Q. During your time in device marketing, has Verizon ever set a vertical search provider as the default search engine on a device?

A. . . . I am not aware of that happening.

Brian Higgins, Chief Customer Experience Officer



Q. And thinking about the market today, who are Bing's search competitors?

A. . . . Candidly, when we talk about competition, it's one company, it's Google.

Jon Tinter, Corporate VP of Business Development



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General search engines provide the ability to “one-stop shop”

- Single location for all queries
- Avoids the time and energy needed to recall or identify the right specialized site
- Provides results with depth and breadth unmatched by any single specialized site
- Caters to habit formation
- Convenient search bars on browsers and devices

“Google should be like a Swiss Army knife: clean, simple, the tool you want to take everywhere.”

Marissa Mayer, *Former Product Manager*



2002

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General search engines provide the ability to “one-stop shop”



Hal Varian
Chief Economist



Q. Google answers noncommercial queries because it hopes, at some point, the user will also type in a commercial query and Google can make money off of it?

A. Something of that sort, yes.

Q. Well, exactly, right?

A. Yeah. Okay.

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Other ways specialized search services differ from general search services

- Searches often must be done in pre-defined ways (drop-down menus, etc.)
- Results pages on specialized search engines are often very different from results pages on general search engines for the same query
- Many specialized search services limit results to info on site (not entire web)

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The results pages of general search engines and specialized search engines have significant differences

Google

Google search results for "valentines day".

Search bar: valentines day

Results: About 363,000,000 results (0.77 seconds)

Did you mean: **valentine's day**

Tuesday, February 14
Valentine's Day 2023

People also ask:

- What is the real story of Valentine's Day?
- What Valentines Day means?
- What are the 7 Days of Valentine?
- Why is Feb 14 called Valentine's Day?

Valentine's Day - Wikipedia

Valentine's Day, also called Saint Valentine's Day or the Feast of Saint Valentine, is celebrated annually on February 14. It originated as a Christian ...

Also called: Saint Valentine's Day or the F... Date: February 14; (fixed by the Wester... Observed by: People in many countries; ... Significance: Feast day of Saint Valenti...

Saint Valentine - Valentine's Day (2010 film) - Valentine's Day (disambiguation)

History of Valentine's Day

Feb 11, 2022 — Valentine's feast day in the middle of February in an effort to "Christianize" the pagan celebration of Lupercalia. Celebrated at the Ides of ...

Valentine's Day | Definition, History, & Traditions | Britannica

Valentine's Day, also called St. Valentine's Day, holiday (February 14) when lovers express their affection with greetings and gifts.

Valentine's Day (2010) - IMDb

Intertwining couples and singles in Los Angeles break-up and make-up based on the pressures and expectations of Valentine's Day.

Rating: 5.7/10 · 119,682 votes

Valentine's Day

Saint's day

Valentine's Day, also called Saint Valentine's Day or the Feast of Saint Valentine, is celebrated annually on February 14. [Wikipedia](#)

Date: Tuesday, February 14, 2023

Significance: Feast day of Saint Valentine; the celebration of love and affection

Message

Colors

Text

Valentines For Friends

Valentine Character

People also search for

amazon.com

Amazon search results for "valentines day".

Search bar: valentines day

1-48 of over 100,000 results for "valentines day"

Eligible for Free Shipping

Free Shipping by Amazon

All customers get FREE Shipping on orders over \$25 shipped by Amazon

Department

- Movies & TV
- Prime Video
- Movies & Films
- Home Décor Products
- Grocery & Gourmet Food
- Paper & Printable Media
- Women's Fashion
- Men's Fashion
- Kids' Party Favor Sets
- See All 12 Departments

Customer Reviews

★★★★★ & Up

★★★★★ & Up

★★★★★ & Up

★★★★★ & Up

TV Show

Spectacular Spider-Man

Elmo

Actor

- Taylor Swift
- Jessica Biel
- Jennifer Garner
- Anne Hathaway
- Jessica Alba
- Julia Roberts
- Jamie Foxx
- Bradley Cooper
- See more

Director

- Garry Marshall
- Peter Duncan

Price

\$0 to \$1

\$1 to \$3

\$3 to \$5

\$5 to \$10

\$10 to \$15

\$15 to \$20

Over \$20

Video Format

- Prime Video
- Blu-ray
- DVD

Gourmet Gift Baskets - Nuttin' Says Yum Better.

Shop Nut Cravings®

Mixed Nuts Gift Basket + Green Ribbon (7 A...

★★★★★ 5,621

prime

Dried Fruit & Nuts Gift Basket Black Tower +...

★★★★★ 2,572

prime

Dried Fruit & Nuts Gift Basket in Reusable...

★★★★★ 1,336

prime

¿Quieres comprar en Amazon en **español**?

RESULTS

Price and other details may vary based on product size and color.

Valentine's Day (2010)

2010

★★★★★ ~ 3,941

Prime Video

From \$3.99 to rent

From \$12.99 to buy

I Hate Valentine's Day

2009

★★★★★ ~ 658

Prime Video

From \$2.99 to rent

From \$9.99 to buy

Or available with a Prime Video Channels Subscription

The Valentine's Day That Almost Wasn't

1924

★★★★★ ~ 11

Prime Video

From \$0.99 to rent

From \$2.99 to buy

Nike Women's Basketball Shoes

★★★★★ ~ 2,528

\$299⁸⁶

prime

FREE Shipping by Amazon

Jewelry for Women Wife Infinity Heart Birthstone Necklace 18K White Gold...

★★★★★ ~ 15

\$99⁹⁹

Save \$10.00 with coupon (some

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General search services differ significantly from social media

- Search function typically limited to the social media platform
- There are likely significant differences in the reliability of the information available on social media vs. general search engines
- Internal Google assessments of possible competition between Google and Facebook found no evidence that increased use of Facebook led to reduced use of Google

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Google recognizes general search services as a relevant market

- Internal Google documents
- Android RSA terms
- Chrome defaults
- EU Choice Screen

REDACTED FOR PUBLIC FILING

Google recognizes general search services as a relevant market

- Internal Google documents: Google's internal documents focused on general search services rivals and market shares
- Android RSA terms
- Chrome defaults
- EU Choice Screen

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Google tracks market shares for general search engines

Message

From: Penny Chu [Redacted]@google.com
Sent: 1/30/2014 7:40:34 AM
To: Matt Cutts [Redacted]@google.com; Ben Gomes [Redacted]@google.com; Alan Eustace [Redacted]@google.com; Cos Nicolaou [Redacted]@google.com; Einar Lipkowitz [Redacted]@google.com; Ben Smith [Redacted]@google.com; Scott Huffman [Redacted]@google.com; Amit Singhal [Redacted]@google.com; Derek Wong [Redacted]@google.com; Willa Lo [Redacted]@google.com; Sundar Pichai [Redacted]@google.com; Hal Varian [Redacted]@google.com; Lorraine Twohill [Redacted]@google.com; Joan Bradd [Redacted]@google.com; Tony Fagan [Redacted]@google.com; Jane Penner [Redacted]@google.com; Jake Hubert [Redacted]@google.com; Rach Maheshwari [Redacted]@google.com; Heath Row [Redacted]@google.com; Michaela Prescott [Redacted]@google.com; Tamar Yehoshua [Redacted]@google.com; Patrick Riley [Redacted]@google.com; David Rolfe [Redacted]@google.com; Elissa Lee [Redacted]@google.com; Cristina Bita [Redacted]@google.com; Karen Dubas [Redacted]@google.com; Brian Bernhart [Redacted]@google.com; Jiangfeng Ai [Redacted]@google.com; Tara Kousha [Redacted]@google.com; Sergio Civera [Redacted]@google.com; Makoto Uchida [Redacted]@google.com; Jeff Whipp [Redacted]@google.com; Jim Koehler [Redacted]@google.com; Michael Murakami [Redacted]@google.com; Aiyun Chen [Redacted]@google.com; Remo Storni [Redacted]@google.com; Deepak Ramanathan [Redacted]@google.com; Cliff Hopkins [Redacted]@google.com; Yo Chen [Redacted]@google.com; Jonathan Bullock [Redacted]@google.com; Ruwin Perera [Redacted]@google.com
CC: Penny Chu [Redacted]@google.com
Subject: Finalized Dec and Q4 2013 US internal search share metrics

Hi everyone,
Below please find our finalized internal US search share metrics for Dec and Q4 2013. All our internal data-sources and Comscore show an increase for Bing in both Dec 2013 as well as in Q4 2013. We see a bit of a mixed bag for Google share. Our internal data-sources show Yahoo share being flat in Dec 2013, but continue to lose share in Q4 2013 (vs Q3 2013). Comscore is even reporting that Yahoo is at an all-time low with 10.8% search share in Dec.

I am happy to report that as of Dec 2013, we are able to re-introduce Analytics as an internal data-source we can use for search share reporting. However, my team also recently discovered that Yahoo Search has gone HTTPS, which significantly impacts our ability to track Yahoo share across all three of our internal data-sources (US online panel, AdSense and Analytics) going forward. My team is actively working to see what workarounds we have, but please note that search share reporting may be impacted in the short-term.

Adding Mobile tracking to our US online panel should begin in the next few weeks, and I hope we will have some preliminary #s to share with you by end of quarter.

Thanks very much to Remo Storni and Makoto Uchida for continuing to provide this data. Please let us know if you have any questions.

-Penny

DEC 2013 INTERNAL US SEARCH SHARE METRICS (pct pts delta from NOV 2013)

US Online Panel Search Session Share (home-only, desktops, incl Mac OS)*
Google 76.3% (+0.3 pct pt)
Bing 13.3% (+0.2 pct pt)
Yahoo 6.7% (no change)
*Prior to 10K expansion sample size. Observed -0.4 pct pt for AOL and -0.1 pct pt for Ask

AdSense U.S. Click Share
Google 78.6% (-0.5 pct pt)
Bing 11.9% (+0.7 pct pt)
Yahoo 7.1% (no change)

Ex. No.
UPX0399
1:20-cv-03010-APM
GOOG-DOJ-1909595

HIGHLY CONFIDENTIAL

DEC 2013 INTERNAL US SEARCH SHARE METRICS (pct pts delta from NOV 2013)

US Online Panel Search Session Share (home-only, desktops, incl Mac OS)*
Google 76.3% (+0.3 pct pt)
Bing 13.3% (+0.2 pct pt)
Yahoo 6.7% (no change)
*Prior to 10K expansion sample size. Observed -0.4 pct pt for AOL and -0.1 pct pt for Ask

AdSense U.S. Click Share
Google 78.6% (-0.5 pct pt)
Bing 11.9% (+0.7 pct pt)
Yahoo 7.1% (no change)

Analytics US. Click Share [NEW in Dec!]
Google 80.6%
Bing 10.6%
Yahoo 6.6%

(for comparison)
Comscore U.S. Explicit Search Share
Google 67.3% (+0.6 pct pt)
Bing 18.2% (+0.2 pct pt)
Yahoo 10.8% (-0.4 pct pt) [all-time low]

Q4 2013 INTERNAL US SEARCH SHARE METRICS (pct pts delta from Q3 2013)

US Online Panel Search Session Share (home-only, desktops, incl Mac OS)
Google 76.3% (-0.1 pct pt)
Bing 13.3% (+0.6 pct pt)
Yahoo 6.6% (-0.1 pct pt)

AdSense U.S. Click Share
Google 79.0% (+1.1 pct pt)
Bing 11.3% (+0.2 pct pt)
Yahoo 7.1% (-0.5 pct pt)

2014

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Google collects competitive data on general search engines

Google

Google Search Competitive Factpack
- Initial Insights

August 2020

Redacted

[Link to presentation friendly version](#)
[Link to deep dive on verticals](#)

* * *

Data Cube Concept - Ideal

One data source

1. Companies
Google
Bing
Duckduckgo
Qwant
Ecosia

3. Dimensions
Country
Surface (Mobile, Desktop)
Verticals
Modes
Local vs. all search
CUJ vs. specific query
Content type (Covid vs. not)

2. Metrics
Ranking
Quality
Trust
Investments

4. Perception
Users
Regulators
Media

5. Time
Past vs. present vs. Future
Time series

1. Companies

Google

Bing

Duckduckgo

Qwant

Ecosia

2020

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UPX0268, at -109, -182 (Aug. 2020).

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Google recognizes general search services as a relevant market

- Internal Google documents
- Android RSA Terms: Android RSAs prevent preinstallation of “alternative search services” which has meant alternative general search engines
- Chrome defaults
- EU Choice Screen

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Google recognizes general search services as a relevant market

- Internal Google documents
- Android RSA terms
- Chrome defaults: Chrome Browser only lists general search engines in the settings option to change the search default
- EU Choice Screen

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Google recognizes general search services as a relevant market

- Internal Google documents
- Android RSA terms
- Chrome defaults
- EU Choice Screen only lists general search engines and does so to “ensure a good user experience”

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Only general search services are eligible for the EU choice screen

7/31/23, 8:54 PM

Android Choice Screen

The user will be required to choose one search provider from the choice screen during setup. The effect of a user selecting a search provider from the choice screen will be to (i) set the search provider in a home screen search box to the selected provider, (ii) set the default search provider in Chrome (if installed) to the selected provider, and (iii) install the search app of the selected provider (if not already installed). Note that in the case where a user takes an action to remove the Google search widget (including by restoring a previous device configuration where the widget had been removed), the widget will not be shown.

The choice screen will begin appearing on devices distributed in the EEA starting in early 2020.

Eligible search providers will need to fill out an application form and can bid for inclusion based on an auction. The auction process is explained in greater detail below.

The choice screen auction

Google will use a first-price sealed-bid auction to select the other general search providers that appear in the choice screen. Google will conduct auctions on a per-country basis for the period from January 1, 2020 to December 31, 2020. Following the initial round of auctions, any subsequent rounds will occur once per year.

In each country auction, search providers will state the price that they are willing to pay each time a user selects them from the choice screen in the given country. Each country will have a minimum bid threshold. The three highest bidders that meet or exceed the bid threshold for a given country will appear in the choice screen for that country.

The auction winners, and Google, will be ordered randomly in the choice screen. In the event of a tie, Google will allocate the slots randomly among the tied bidders. In the event that fewer than three eligible search providers meet or exceed the bid threshold, Google will fill any remaining slots randomly from the pool of eligible search providers. The pool of eligible providers will include those that applied to participate in the choice screen but did not submit bids.

Eligibility criteria for participating in the choice screen

To ensure a good user experience, search providers that wish to participate in the choice screen must satisfy the following requirements.

- **General search provider:** The search provider must operate a "general search service." For purposes of the choice screen, a general search service is one that allows users to search for information across the entire Internet. Specialized or "vertical" search providers – those that only index content from a particular subject – are not eligible to participate in the choice screen. Search providers that are owned by or affiliated with the same company are eligible to appear on the choice screen only once. Search providers that syndicate search results from another provider are eligible to participate.
- **Localization:** Search providers must provide local language support in the countries where they apply to participate. Local language support in this context means that the user interface of both the search app (e.g., settings menu) and the search results page (e.g., navigation buttons) must be provided in one of the required local languages. For a list of languages that must be supported by country, [click here](#). For best practices for localizing apps, visit: <https://developer.android.com/guide/topics/resources/localization/>.
- **App in Google Play:** The search provider must have an app that is available for free in Google Play.

<https://web.archive.org/web/20190802094608/https://www.android.com/choicescreen/>

USDOJ-GOOG-00189505

2/5

“About the choice screen”



Eligibility criteria for participating in the choice screen

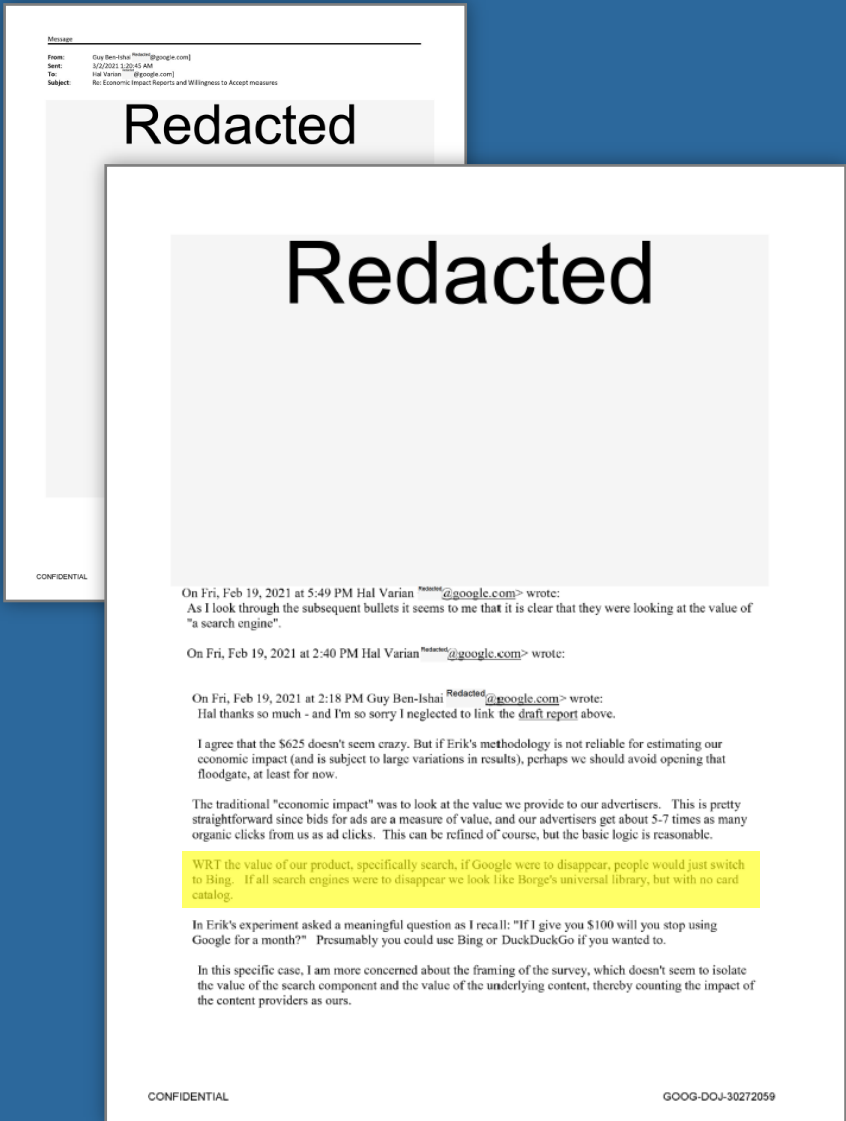
To ensure a good user experience, search providers that wish to participate in the choice screen must satisfy the following requirements.

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2022

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Google's Chief Economist recognizes general search services as a relevant market



WRT the value of our product, specifically search, **if Google were to disappear, people would just switch to Bing. If all search engines were to disappear we look like Borge's universal library, but with no card catalog.**

Hal Varian, *Chief Economist*



2021

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Relevant Market

General Search Services

General Search Text Advertising

Search Advertising

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General search text ads are differentiated from other search ads

General Search Text Ads



balance bikes for toddlers

About 66,900,000 results (0.70 seconds)

Ad <https://www.retrospec.com/>

Retrospec® Kids' Bikes - Best Balance Bikes with Pedals

Youth Bikes for kids of every age, stage, and skill level. They'll be rolling in no time.

Summer Blowout Sale

Up to 50% off bikes, boards, & more New markdowns & limited time offers

Electric Bikes on Sale!

Get up to \$200 off on select e-bike models. Hurry while offer lasts!

Beach Cruisers

Undeniable honest-to-goodness fun meets minimalist efficiency.

Ad <https://www.striderbikes.com/>

Strider 14" Balance Bike - 14" Toddler & Kid Bikes

The 14X is a **Balance Bike** With Perfectly Placed Performance Footrest That Helps **Kids** Ride. The Strider 14X Sport Starts Off as a **Balance Bike**, But Adjusts to Being a **Pedal Bike**.
[Learn to Stride Guide](#) · [FAQ](#) · [Learn To Ride Guide](#) · [The Strider Community](#) · [Assembly](#) · [Blog](#)

Ad <https://www.bestproductsreviews.com/>

Our 10 Best Balance Bikes For Toddlers in The US - September...

Find and compare the best products based on price, features, ratings & reviews. Stop wasting time compiling reviews & use our list to make an informed purchase.

<https://www.twowheelingtots.com> > 10-best-balance-bikes


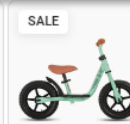

10 Best Balance Bikes for Kids of All Ages - Two Wheeling Tots

Aug 25, 2022 — **Balance bikes** are perfect bikes for 2-year-olds (and up!) as they teach **kids** to balance on two wheels and ride independently. **Balance bikes** are ...
[Woom 1](#) · [Strider Classic And Strider...](#) · [Balance Bike Faq's](#)

Other Types of Search Ads



SALE




 Retrospec Cricket Baby... \$49.99 Retrospec ★★★★★ (272)	 JOYSTAR Roller Balan... \$55.00 \$60 Joystar Bike Free shipping	 12" Air Tires Balance Bike... \$169.99 Belsize Bike \$69.99 with ...
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amazon

1-48 of over 50,000 results for "brown shoes"

RESULTS

Price and other details may vary based on product size and color.

 +17 colors/patterns Sponsored by Jousen Men's Dress Shoes Classic Mens Oxfords Formal Business... ★★★★★ - 4,732 \$48.99 FREE Shipping by Amazon	 DREAM PAIRS Bruno Marc Moda Italy Men's Prince Classic Modern Forma... ★★★★★ - 13,012 \$49.99 FREE Shipping by Amazon	 Clarks Men's Tilden Walk Oxford ★★★★★ - 6,975 \$63.29 \$99.00 FREE Shipping by Amazon Prime Try Before You Buy
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Product Listing Ads (PLAs)

Search

Destination/property name

Cartersville

Check-in date

Friday, June 10, 2022

Check-out date

Sunday, June 12, 2022

2 nights stay

2 adults - 0 children - 1 room

☐ I'm traveling for work

Search

Filter by:

Your Budget (per night)

☐ Set your own budget

☐ \$50 - \$100 8

☐ \$100 - \$150 12

☐ \$150 - \$200 6

☐ \$200 + 11

Cartersville: 12 properties found

Our Top Picks Homes & apartments first Price (lowest first) Best reviewed & lowest price Stars (highest first)

Comfort Inn & Suites Cartersville - Emerson Good 7.2 (176 reviews)

Cartersville · Show on map · 3.8 miles from center

Standard King Room - Non-Smoking
1 king bed
Breakfast included

\$277

See availability

Courtyard by Marriott Cartersville Ad Very Good 8.5 (69 reviews)

Cartersville · Show on map · 3 miles from center

King Guest Room with Sofa Bed
2 beds (1 king, 1 sofa bed)
Only 5 rooms left at this price on our site

\$464

See availability

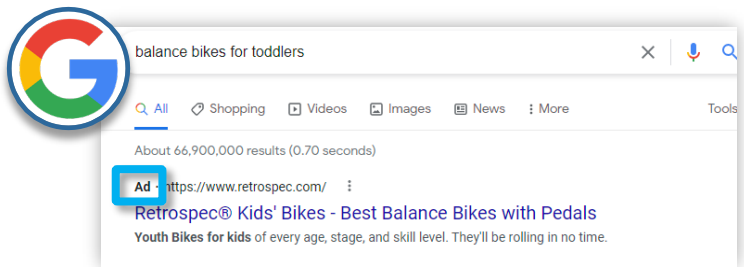
Other Search Ads

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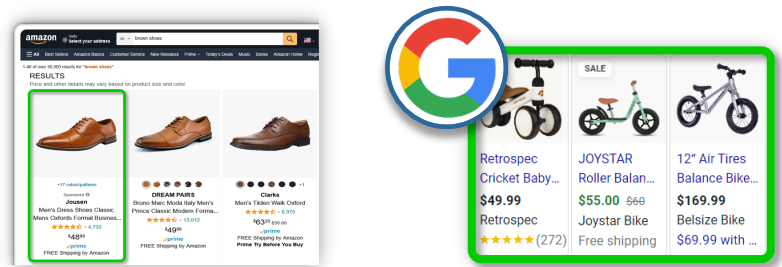
Search ads are differentiated from other digital ads

Search Ads

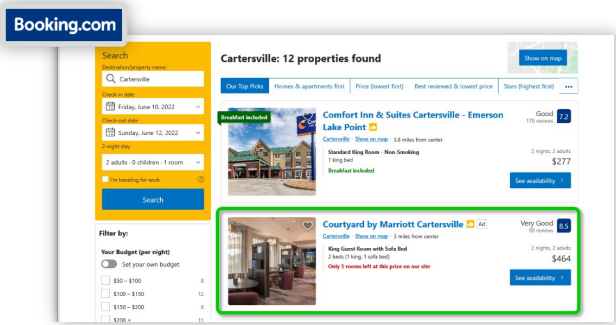
General Search Text Ads



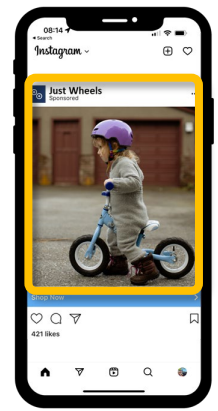
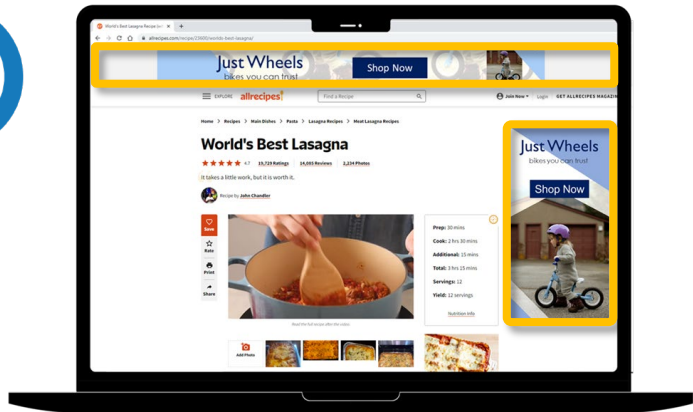
Product Listing Ads (PLAs)



Other Search Ads



Display/Social Ads



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Factors affecting the substitutability of ad products

- Their role in consumers' purchase journeys
- The characteristics of their audiences and the degree to which they overlap
- The degree to which ads can be effectively targeted
- The form and level of their pricing
- The size of their audiences
- Advertisers' awareness of the products effectiveness and prices
- Advertisers' participation on their ad purchasing platforms

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Relevant Market

General Search Services

General Search Text Advertising

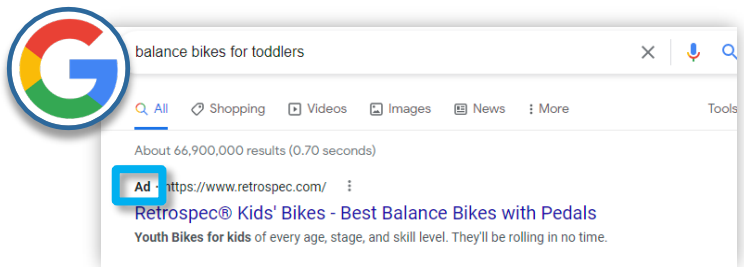
Search Advertising

REDACTED FOR PUBLIC FILING

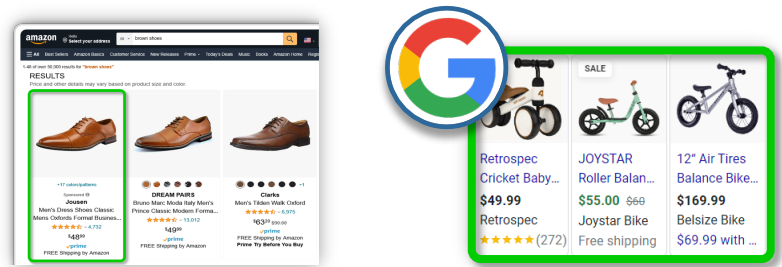
Search ads are differentiated from other digital ads

Search Ads

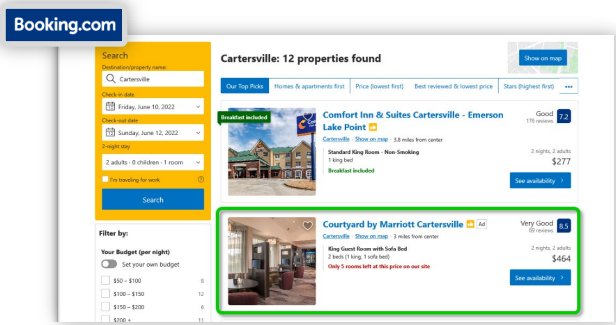
General Search Text Ads



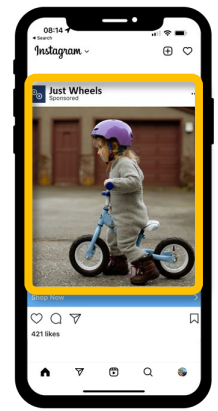
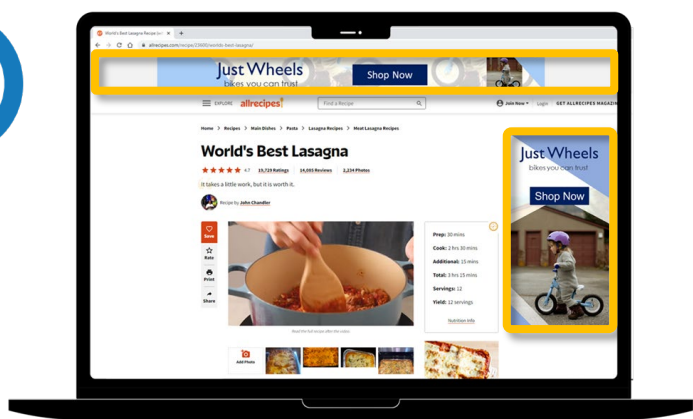
Product Listing Ads (PLAs)



Other Search Ads



Display/Social Ads



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Search ads are differentiated from display ads in important ways

- Display ads do not have an expressed signal of a consumer's intent at a given moment
- Display ads are typically used to build awareness or improve brand image rather than “conversion”
- Advertisers pay much higher prices for text ads than for display ads, consistent with their differentiation

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Advertisers pay much higher prices for text ads than for display ads, consistent with their differentiation

Average Price Per Thousand Ad Impressions (CPM) for General Search Text Ads and Display Ads, 2020

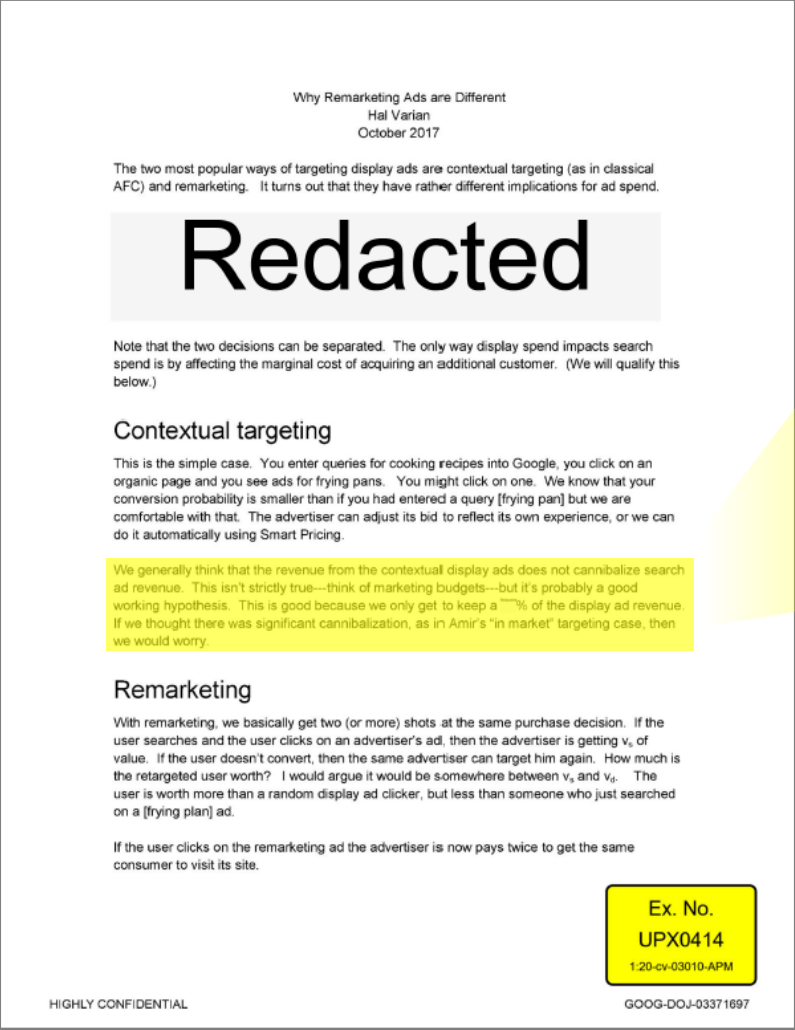
Redacted

Display ads

Search text ads

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Google's Chief Economist recognizes that search ads are significantly differentiated from display ads



We generally think that the revenue from the contextual display ads does not cannibalize search ad revenue.

Hal Varian, *Chief Economist*



2017

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Intent captured by retargeting ads is not as strong as intent captured by search ads



“And what matters much more than having a long and detailed history is having a solid indication of what the user is doing now, because **recency is everything.**”

* * *

“So reminder ads are a form of intent. **It’s not as strong as the intent when you are searching something**, but it says, well, you’re probably interested in this product because you visited a website and examined that product.”

Hal Varian, *Chief Economist*



2020

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Google explains to advertisers how search ads differ from display ads

2022

Choose the right campaign type



Google Ads begins with a goal and a campaign.

You'll choose a campaign type based on your marketing goals, brand strategy, and how much time you can invest.

This article helps you select the right campaign type for your advertising needs.

Search campaigns: Text ads on search results

Search campaigns are text ads on search results that let you reach people while they're searching on Google for the products and services you offer.

It's great for driving sales, leads, or traffic to your website, as you can show your ads to people actively searching for your products and services.

Why choose Search campaigns

- **Sales and leads:**
 - Boost your online sales and signups.
 - Consider using leads if you have a longer sales cycle.
- **Easy setup:**
 - Write text ads and pick keywords.
 - Skip special files or assets—these aren't needed.
 - Try **Smart campaigns** for an even easier setup.
- **Highly specific targeting:** Reach people actively searching for what you offer.

CREATE SEARCH CAMPAIGN

Display campaigns: Image ads on websites

Display campaigns let you reach a relevant audience with visually engaging ads as they browse millions of websites, apps, and Google-owned properties, such as YouTube, to achieve your marketing objectives. Display campaigns are a great way to expand your reach and stay top of mind with an audience beyond just Google Search.

You can also create a Display campaign that uses your **data segments** to show ads to people who've visited your website or have used your app.

Why choose Display campaigns

- **Sales and leads:** Use visually engaging call-to-actions to drive sales and signups.
- **Awareness and consideration:** Create memorable ads to make people aware of your brand or consider your product.
- **Reach:** Target people beyond search results while they're browsing websites and apps.
- **Your data segments:** Follow up with people who've already viewed your ads or visited your site.

Types of Display campaigns



Tip: It's helpful to use an image editing tool to create square and landscape versions of your display ad in the right dimensions and file size.

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- **Your data segments:** Follow up with people who've already viewed your ads or visited your site.

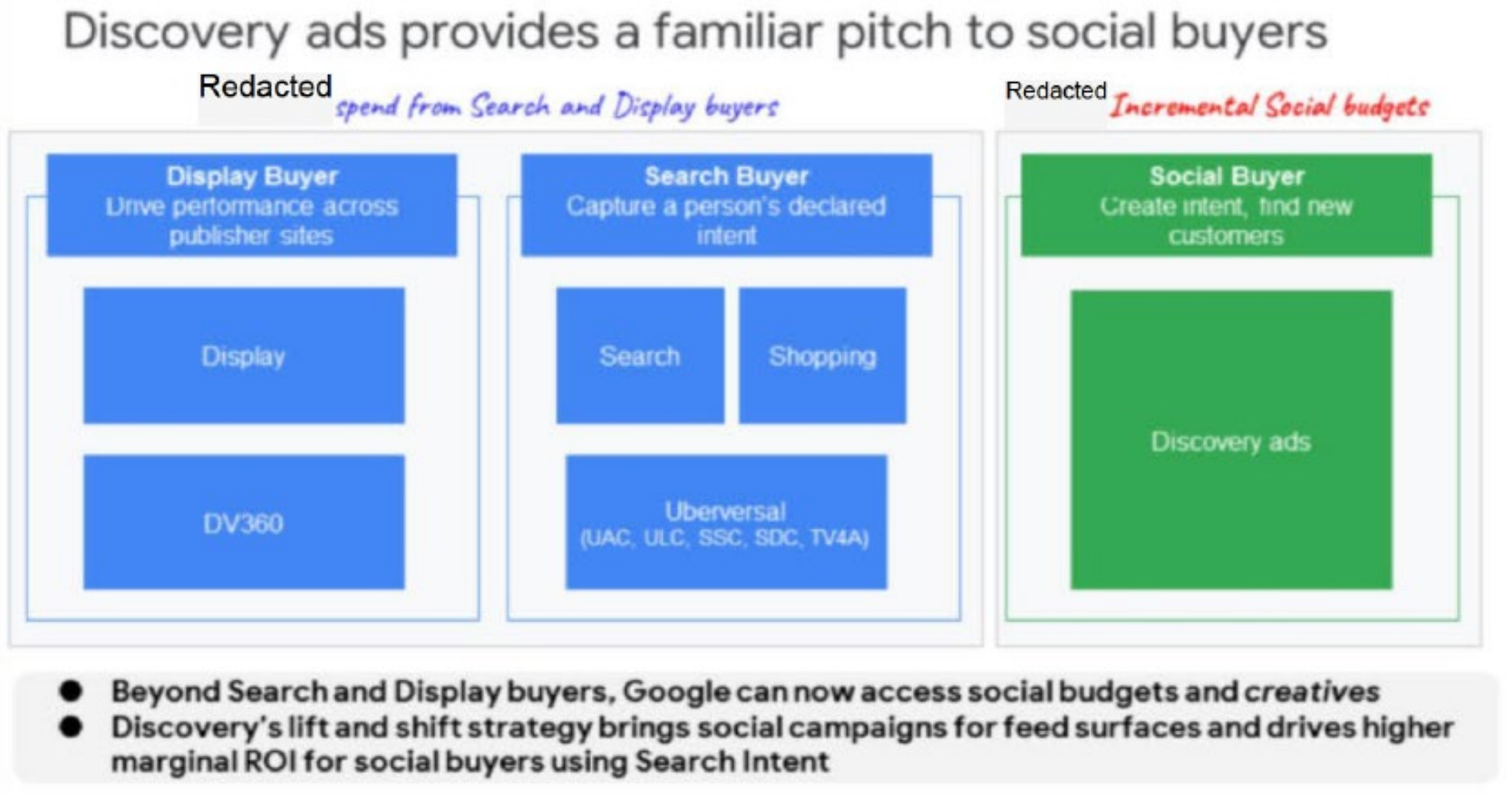
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Search ads are differentiated from social media ads in important ways

- Social media ads are targeted based largely on expressed or inferred interests rather than expressed intent at a given moment
- Social media ads are typically aimed at goals like awareness and branding
- Apple's recent privacy initiatives have further reduced the targeting capabilities of social media ads

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Google launched discovery ads to compete with social media ads



2020

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General search text ads are differentiated from other search ads

General Search Text Ads



balance bikes for toddlers

About 66,900,000 results (0.70 seconds)

Ad <https://www.retrospec.com/>

Retrospec® Kids' Bikes - Best Balance Bikes with Pedals

Youth Bikes for kids of every age, stage, and skill level. They'll be rolling in no time.

Summer Blowout Sale

Up to 50% off bikes, boards, & more New markdowns & limited time offers

Electric Bikes on Sale!

Get up to \$200 off on select e-bike models. Hurry while offer lasts!

Beach Cruisers

Undeniable honest-to-goodness fun meets minimalist efficiency.

Ad <https://www.striderbikes.com/>

Strider 14" Balance Bike - 14" Toddler & Kid Bikes

The 14X is a **Balance Bike** With Perfectly Placed Performance Footrest That Helps **Kids** Ride. The Strider 14X Sport Starts Off as a **Balance Bike**, But Adjusts to Being a **Pedal Bike**.
[Learn to Stride Guide](#) · [FAQ](#) · [Learn To Ride Guide](#) · [The Strider Community](#) · [Assembly](#) · [Blog](#)

Ad <https://www.bestproductsreviews.com/>

Our 10 Best Balance Bikes For Toddlers in The US - September...

Find and compare the best products based on price, features, ratings & reviews. Stop wasting time compiling reviews & use our list to make an informed purchase.

<https://www.twowheelingtots.com> > 10-best-balance-bikes




10 Best Balance Bikes for Kids of All Ages - Two Wheeling Tots

Aug 25, 2022 — **Balance bikes** are perfect bikes for 2-year-olds (and up!) as they teach **kids** to balance on two wheels and ride independently. **Balance bikes** are ...
[Woom 1](#) · [Strider Classic And Strider...](#) · [Balance Bike Faq's](#)

Other Types of Search Ads



SALE




 Retrospec Cricket Baby... \$49.99 Retrospec ★★★★★ (272)	 JOYSTAR Roller Balan... \$55.00 \$60 Joystar Bike Free shipping	 12" Air Tires Balance Bike... \$169.99 Belsize Bike \$69.99 with ...
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amazon

1-48 of over 50,000 results for "brown shoes"

RESULTS

Price and other details may vary based on product size and color.

 +17 colors/patterns Sponsored by Jousen Men's Dress Shoes Classic Mens Oxfords Formal Business... ★★★★★ - 4,732 \$48.99 FREE Shipping by Amazon	 DREAM PAIRS Bruno Marc Moda Italy Men's Prince Classic Modern Forma... ★★★★★ - 13,012 \$49.99 FREE Shipping by Amazon	 Clarks Men's Tilden Walk Oxford ★★★★★ - 6,975 \$63.29 \$99.00 FREE Shipping by Amazon Prime Try Before You Buy
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Product Listing Ads (PLAs)

Search

Destination/property name
Cartersville

Check-in date
Friday, June 10, 2022

Check-out date
Sunday, June 12, 2022

2 nights stay

2 adults - 0 children - 1 room

☐ I'm traveling for work

Search

Filter by:

Your Budget (per night)
☐ Set your own budget

☐ \$50 - \$100 8
☐ \$100 - \$150 12
☐ \$150 - \$200 6
☐ \$200 + 11

Cartersville: 12 properties found

Our Top Picks Homes & apartments first Price (lowest first) Best reviewed & lowest price Stars (highest first)

Comfort Inn & Suites Cartersville - Emerson Good 7.2
Cartersville · Show on map · 3.8 miles from center
Standard King Room - Non-Smoking
1 king bed
Breakfast included
\$277
[See availability](#)

Courtyard by Marriott Cartersville Ad Very Good 8.5
Cartersville · Show on map · 3 miles from center
King Guest Room with Sofa Bed
2 beds (1 king, 1 sofa bed)
Only 5 rooms left at this price on our site
\$464
[See availability](#)

Other Search Ads

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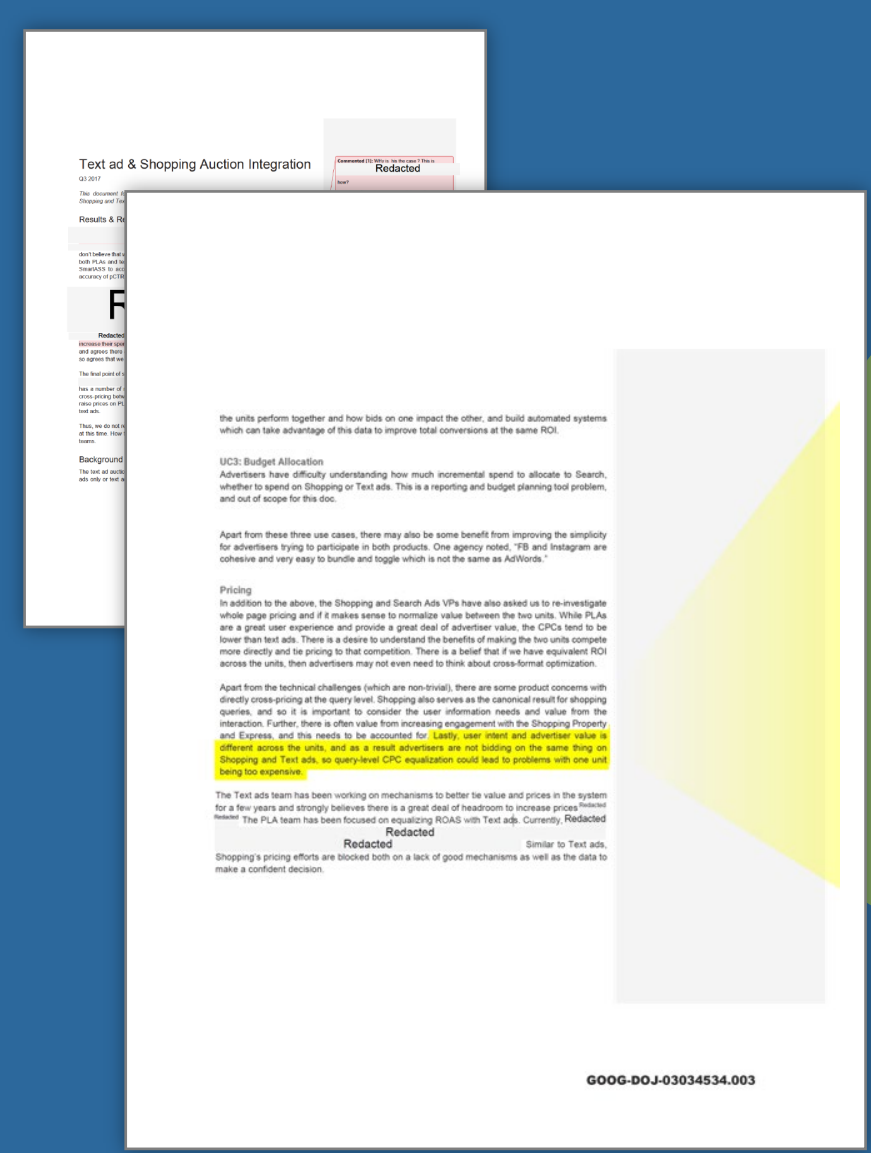
Differences wrt Search Ads

	Shopping	Search Ads
What does it look like?	[screenshot]	[screenshot]
Creatives	Relatively Structured (eg: every n-pack offer has image + price + merchant)	Unstructured (mostly free text)
Formats	Slate Level Primarily (eg: npack, showcase)	Ad Level Primarily (eg: click-to-call, site-links)
Ad Targeting	Keywordless (product groups)	Keywords
Multiple ads from same advertiser allowed	Yes	No
Pricing Algorithms	GSP, IGA (GGSP)	FIA++, MIA
New Ads Growth Direction	Horizontal (carousel)	Vertical (consumes VCAP)
LTV Score (Normalize by VCAP height)	No	Yes

2020

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Google has considered and rejected integrating PLA and text ad auctions



Lastly, **user intent and advertiser value is different across the units, and as a result advertisers are not bidding on the same thing on Shopping and Text ads**, so query-level CPC equalization could lead to problems with one unit being too expensive.

2017

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A majority of Google’s search ad revenue comes from advertisers who buy only text ads

2021 Share of Google Search Ad Revenue From Advertisers Who:

Redacted

Purchase Text Ads But Not PLAs Purchase both Text Ads and PLAs Purchase PLAs But Not Text Ads

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2017 Google Email Thread

Shopping [PLAs] and Text Ads are **different products** with different goals. . . .

Today these two formats [PLAs and text ads] are **siloed in their own world and don't compete**, it will be worth looking at pricing from that point of view.

2023 Trial Testimony

Q. PLAs are a **different species** than text ads; is that right?

A. Yes.

Hal Varian, *Chief Economist*

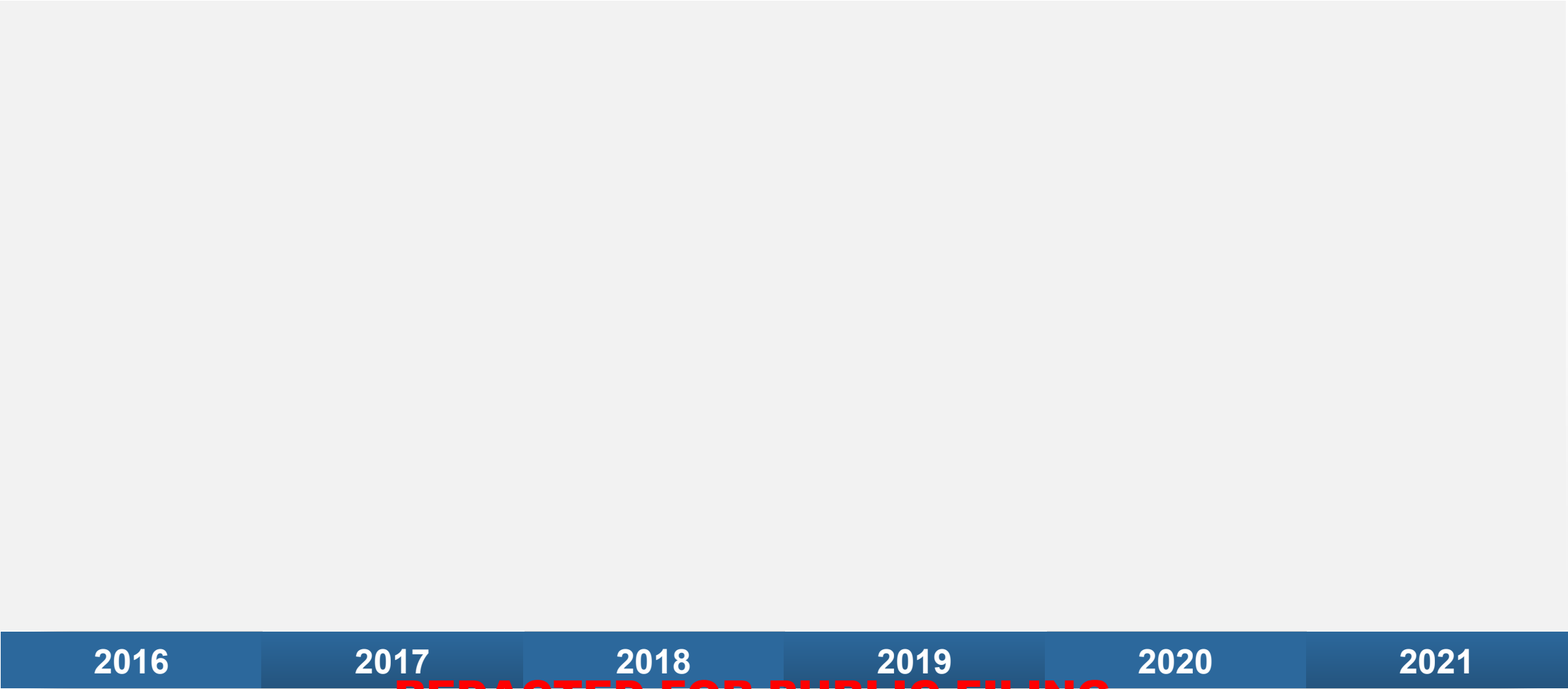


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Text ad prices are higher and have increased over time relative to PLA prices, consistent with their differentiation

Average Annual Cost Per Click (CPC) for US Queries, 2016–2021

Google (Text) Bing (Text) Bing (PLA) Google (PLA)



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Search ads on specialized search engines are differentiated from text ads

- For many ads on specialized search engines, the consumer is taken to another page on the platform
- Advertisers may view specialized search engines as rivals and therefore do not want to advertise on them
- Specialized search engines—some of the biggest advertisers—are not likely to advertise on their rivals

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Relevant Market

General Search Services

General Search Text Advertising

Search Advertising

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Google views search ads as distinct from other digital ads

GLOBAL ADS FINANCIALS FACT PACK | Q3 2019

Revenue by Product

	Search Revenue Fixed (\$m) YoY	Display Revenue Fixed (\$m) YoY	Video Revenue Fixed (\$m) YoY	Total Revenue Fixed (\$m) YoY
Global	Redacted			
Americas				
US				
CA				
BR				
SPLatam				

2019

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Opinion 2

Google possesses substantial market power protected by barriers to entry in each of the relevant markets

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Monopoly Power

General Search Services

General Search Text Advertising

Search Advertising

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Economic evidence that Google has monopoly power in general search services

- Google's market shares
- High barriers to entry and expansion
- Google's significant advantages over its general search rivals
- Low consumer responsiveness to quality reductions
- The substantial profits Google earns from its distribution contracts

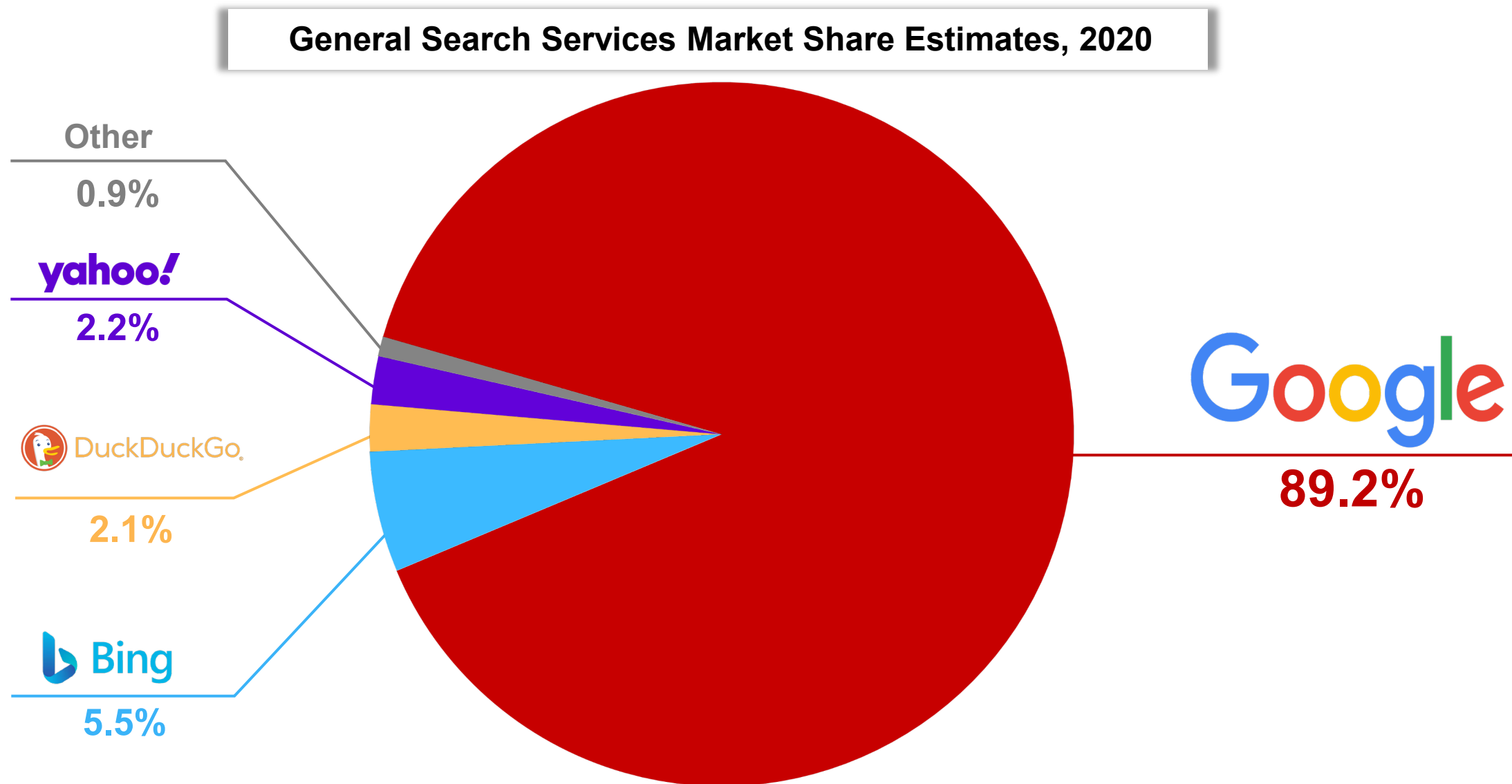
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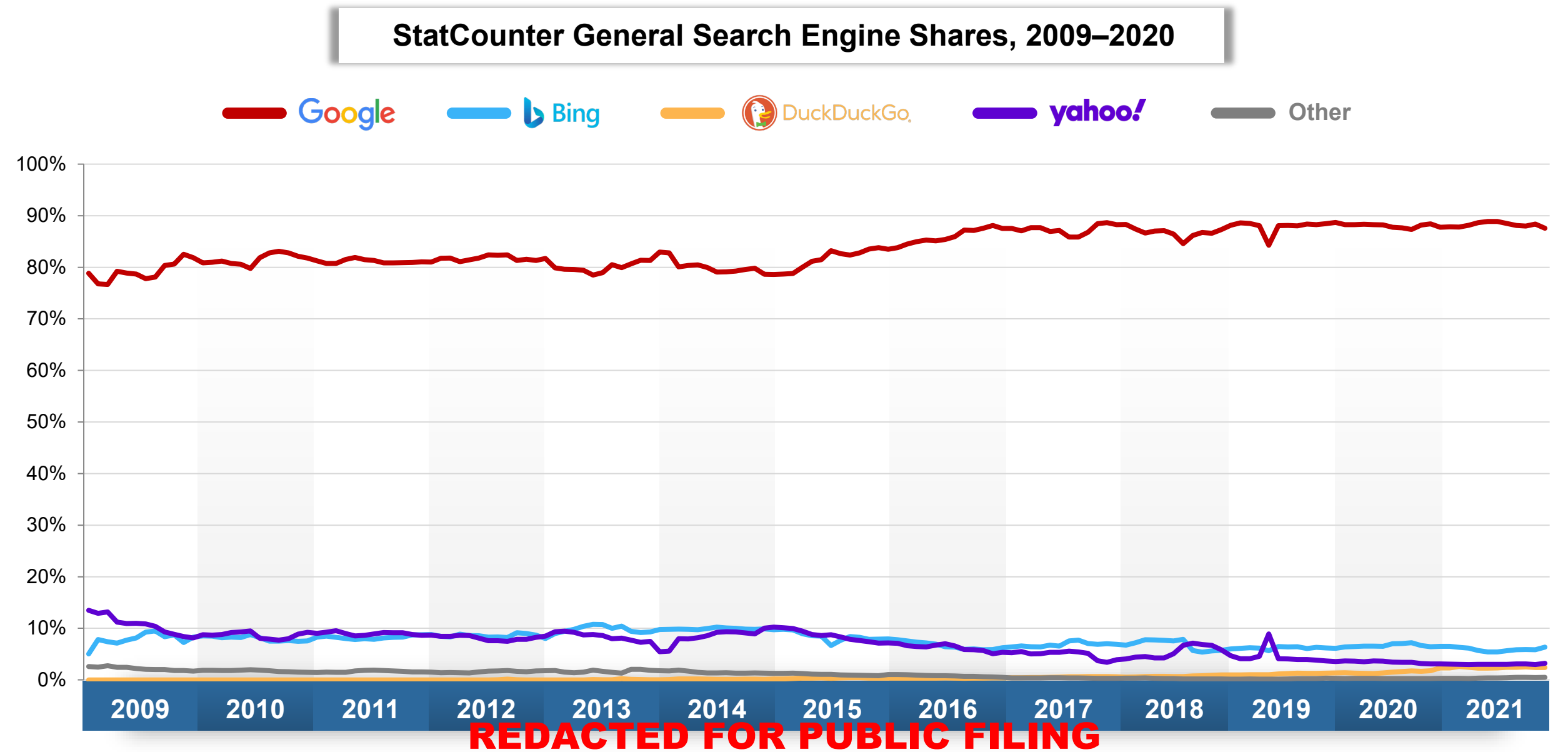
REDACTED FOR PUBLIC FILING

Google has close to 90% of the US general search services market



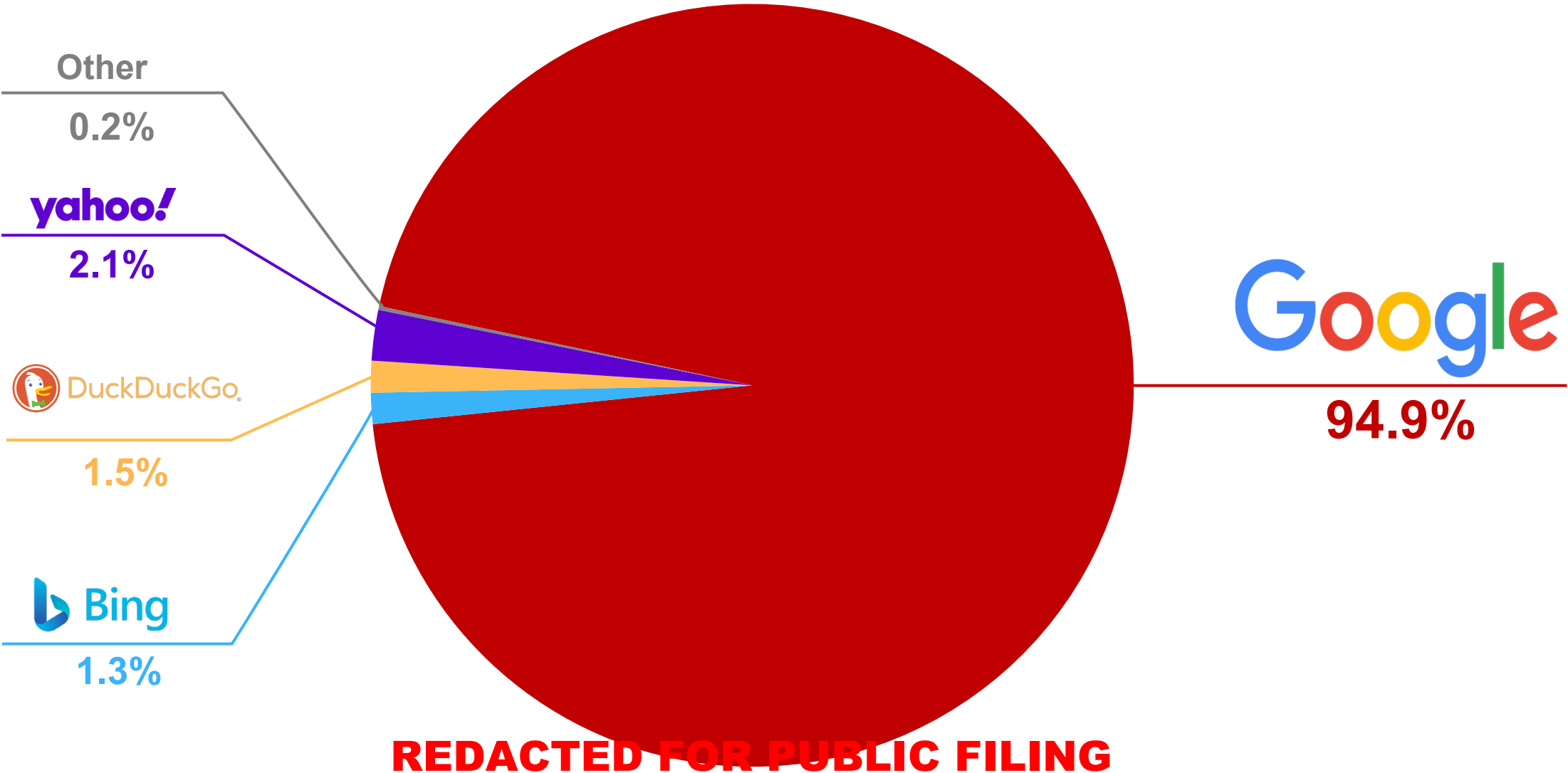
REDACTED FOR PUBLIC FILING

Google has had a dominant and increasing share since at least 2009



On mobile phones Google's share is even higher

StatCounter General Search Engine Shares on Mobile Phones, 2020



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The general search services market has significant barriers to entry

- Large fixed and sunk capital costs
- Google's strong brand recognition and loyalty
- Scale
- Google's ownership of Chrome web browser
- Google's control of search access point defaults through its exclusionary contracts

REDACTED FOR PUBLIC FILING

Entering general search services is expensive

- Annual costs to Google for search services:

Redacted

- Additional annual costs to Google for search advertising:

Redacted

- In 2020, Bing earned only Redacted in search advertising revenue

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REDACTED FOR PUBLIC FILING

Google has significant advantages over its general search rivals

- Search services quality advantages
 - Between 2015 and 2021, the difference in the US between Google's and Bing's IS scores ranged from Redacted
- Brand image and reputation advantages
- Monetization advantages, especially in mobile

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Google's RPM advantage over Microsoft is driven by its much higher RPM on mobile phones

Search Revenue Per 1,000 Queries (RPM), PCs and Mobile Phones

Google (PCs) Google (Mobile Phones) Bing (PCs) Bing (Mobile Phones)

Redacted

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

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Google's experiments show low consumer responsiveness to quality

Connect Search Quality Improvements to Growth

Redacted
go/is-to-growth

Living doc, last updated in July, 2020

Ex. No.
UPX1082

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GOOG1-00001292

Connect Search Quality Improvements to Growth

Results

[Ablation experiments \(2016\)](#) for large ranking components (eg. Navboost, Synonyms, etc.) show that Redacted (global effect, not enough data for per-country effect), [ablation experiment in 2020-2021](#) showed roughly consistent result.

- Study was based on 2-3 month ablations; [external analysis](#) suggests the usage loss continues but at a declining rate for Redacted
- Suggest to convert Redacted increase, which translates to Redacted Search DAU, query, revenue lift under the assumption that queries/DAU and revenue/DAU stays constant. In other words, Redacted of Search revenue ex-TAC (Traffic Acquisition Cost).

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In other words, Redacted
Redacted of Search revenue ex-TAC
(Traffic Acquisition Cost).

2020

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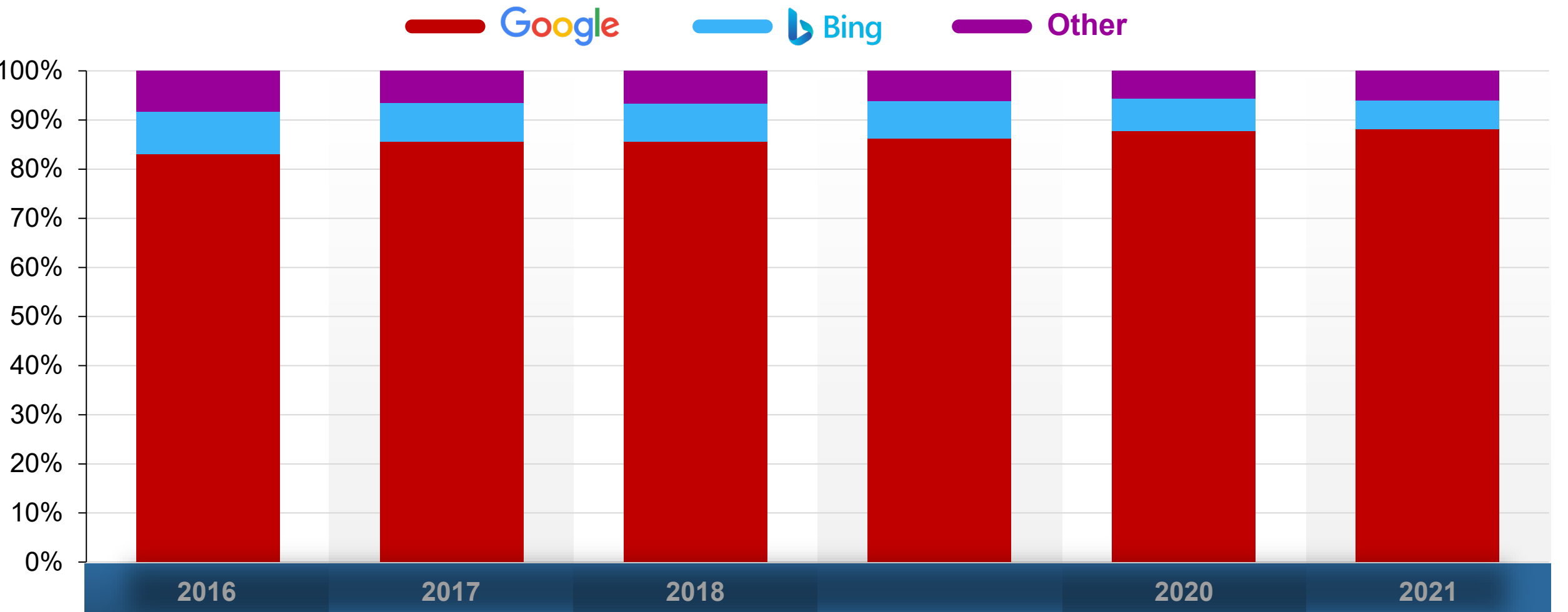
Economic evidence that Google has monopoly power in the relevant ad markets

- Google's high market shares
- Barriers to entry
- Google's significant advantages over its search ad rivals
- Low advertiser responsiveness allowed Google to raise its text ad prices significantly

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Google's US market share in general search text ads was 88% in 2020

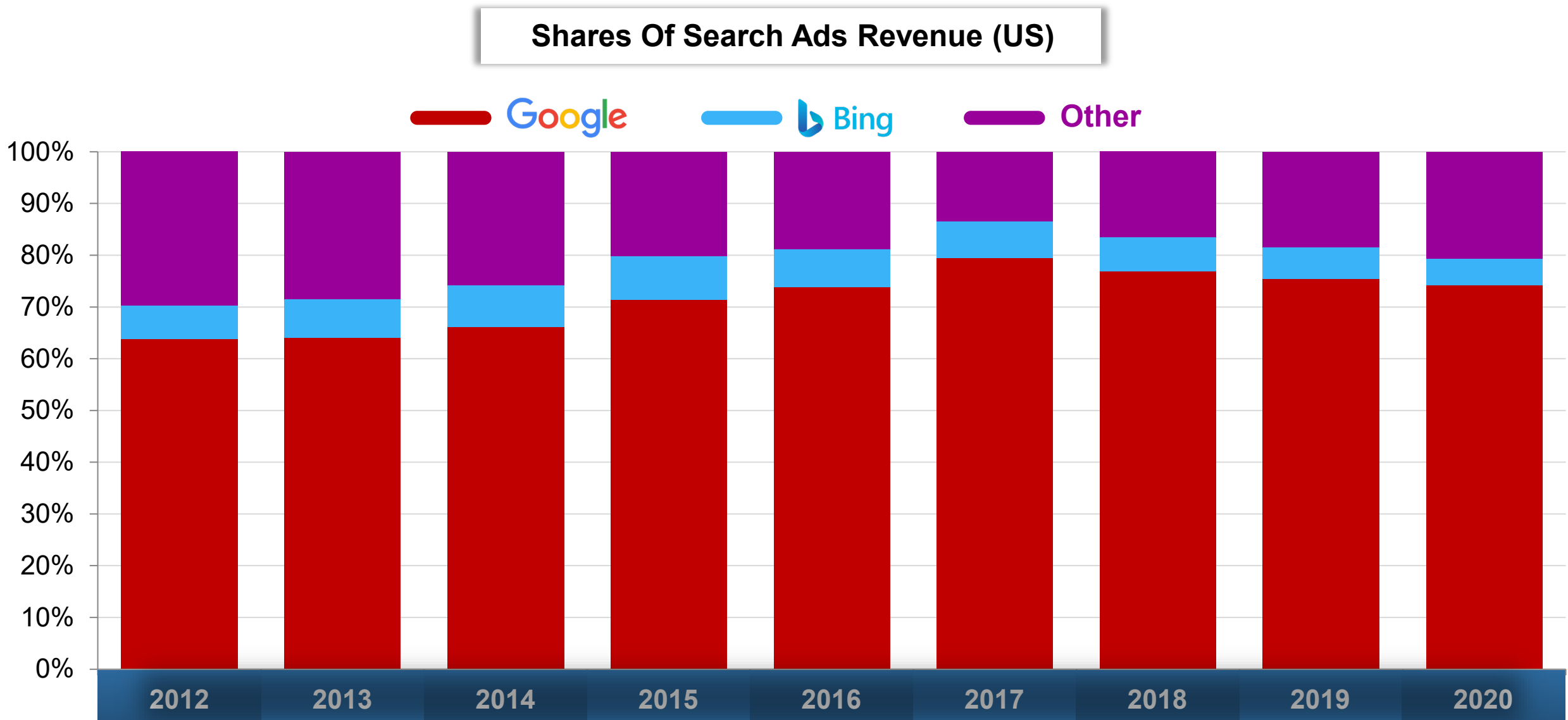
General Search Text Advertising Market Shares (US)



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Google QueryNav data (DOJ RFP 2.70); Microsoft aggregate search statistics data (DOJ RFP 1.00 and C-13); StatCounter Global Stats. (Whinston Reply Report, Fig. 72, at C-13)

Google's US market share in search ads was 74% in 2020

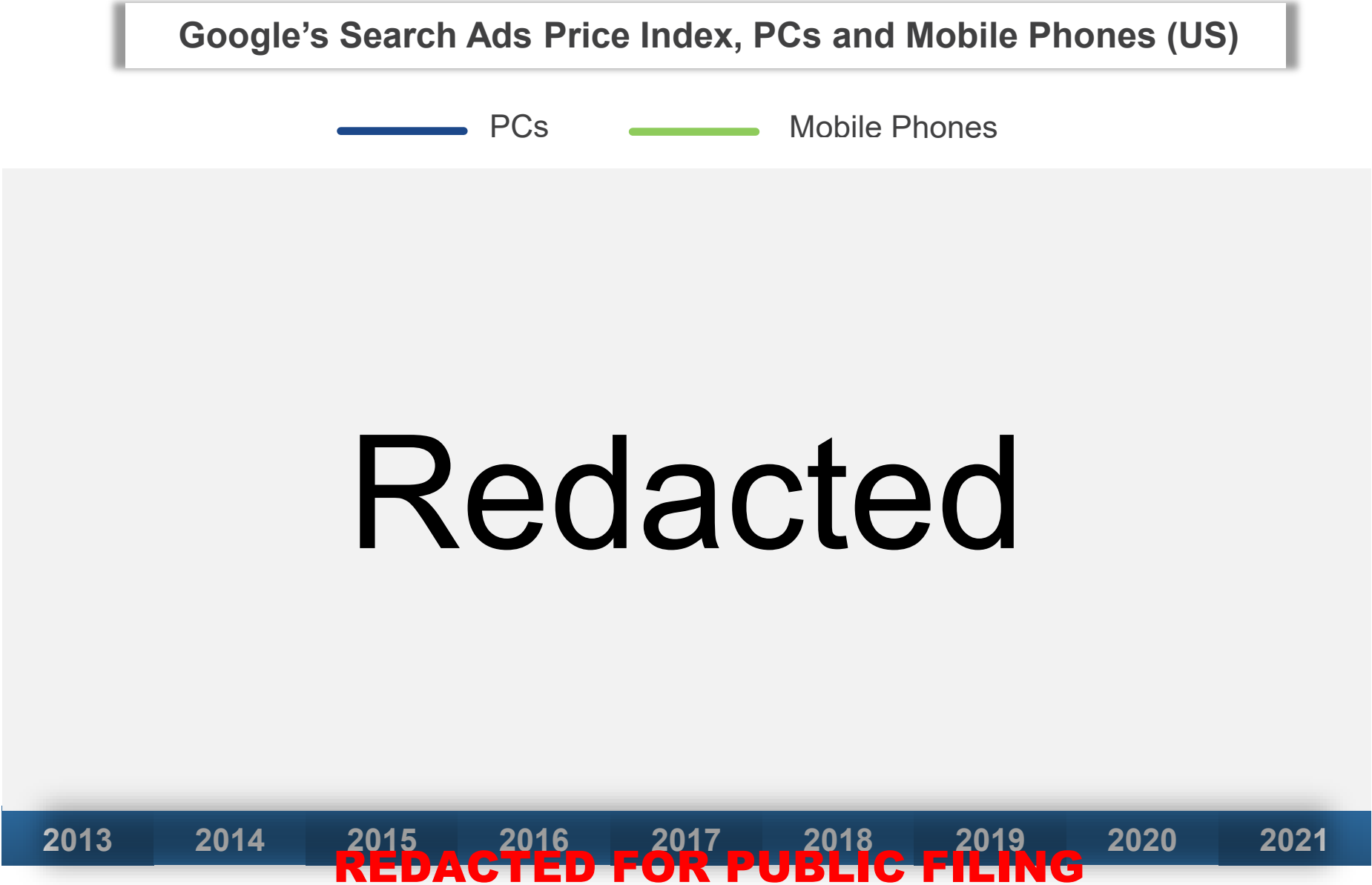


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Google's text ad prices rose over Redacted from 2013 to 2021



Google has launched price increases of 5% on search ads and it resulted in an increase in revenue to Google



Jerry Dischler

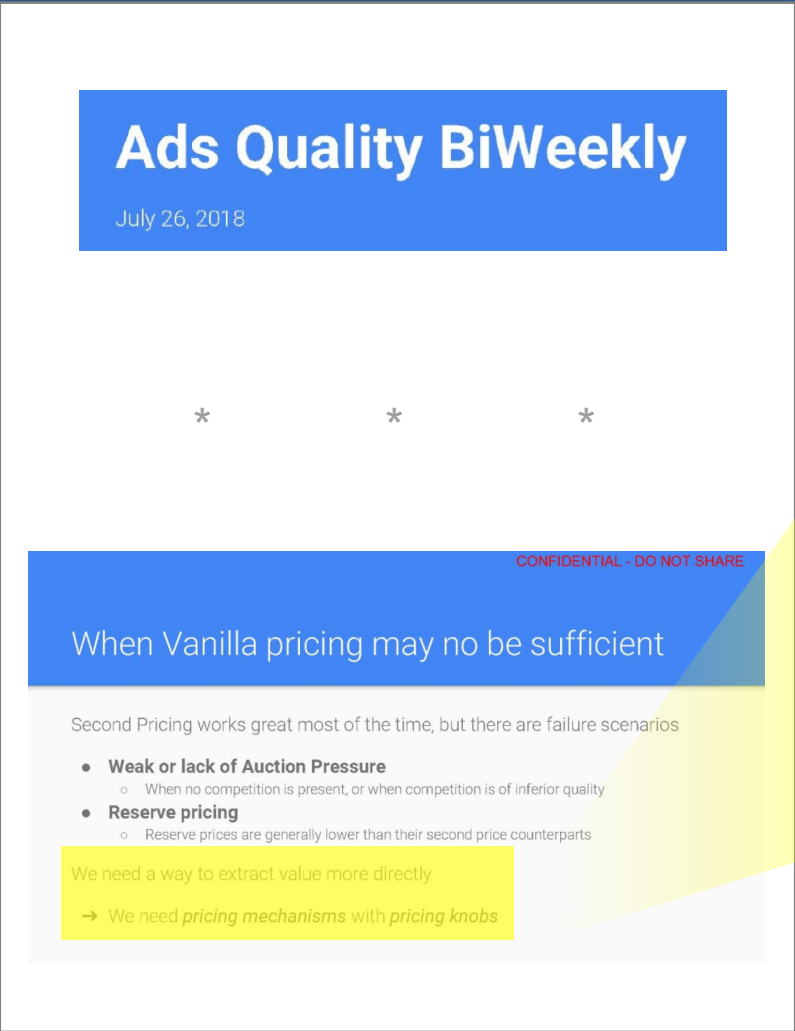
VP and General
Manager of Ads



- Q.** And when Google launched price increases of 5 percent on search ads, it resulted in an increase in revenue to Google; correct?
- A.** Typically, it would result in an increase in revenue.

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Google adjusted the rules of the auction to raise text ad prices



We need a way to extract value more directly . . . We need *pricing mechanisms* with *pricing knobs*

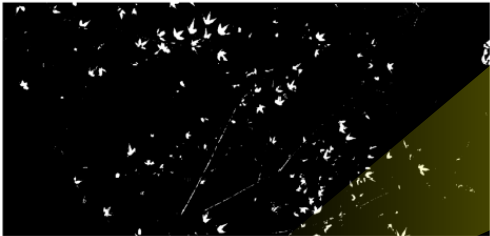
2018

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Redacted

- Omkar: That's what Redacted was for
- Gaurav will follow up with more detailed questions

Momiji Review 2 (6/8/2017)



Slides

- Agenda:
 - Do we want to raise prices?
 - Is it ok to raise prices?
 - How we would roll-out?
- How far we want to go
 - Redacted@: two points:
 - (1) Advertiser paying less than value. Hard to define.
 - (2) People in top 1 operating at a discount relative to other positions.
 - Redacted@: are we in agreement that making the curves for two seems non controversial?
 - Redacted@: not completely safe to get the same curve because some bids can be bogus.
 - Redacted@: But two facts from that graph: it shows 2nd price is broken. Typically E.g if you're bidding much higher than competition, if Nav singleton, if you're better at exploiting queries that weren't found by your competitor...
 - Redacted@: under full competition though that applies -> yes

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GOOG-DOJ-06207063

- Agenda:
 - Do we want to raise prices?
 - Is it ok to raise prices?
 - How we would roll-out?

Redacted

2017

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A) Momiji Opportunity

Likely billions in format pricing + squashing

- ~10% RPM from Format Pricing
- ~5% RPM from Squashing
- Work well together (i.e. ~15% total)
- More opportunity on Mobile than Desktop

2016

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