Revenue
“Mandatory”

“Always On”
“No Real Market Pressure”
“Rank ads sub-optimally in exchange for more revenue”
“Code Yellow”
Agenda

1. Google Has Monopoly Power In Search Ads & Text Ads
2. Search Ads Is A Relevant Product Market
3. Text Ads Is A Relevant Product Market
4. Google’s Price Increases Harmed Advertisers
5. Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING
Agenda

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REDACTED FOR PUBLIC FILING
“Monopoly power is the **power to control prices** or exclude competition.”


“[T]he material consideration in determining whether a monopoly exists is...[if] **power exists to raise prices** or to exclude competition **when it is desired to do so**.”

*Am. Tobacco Co. v. United States*, 328 U.S. 781, 811 (1946) (emphasis added)

Direct evidence shows a firm's “**power to control prices** or exclude competition.”

*United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001) (emphasis added)

Monopoly power exists where “something a firm without a monopoly would have been unable to do” or behavior “**difficult to explain** unless [the defendant has] a monopoly product.”

*Microsoft*, 253 F.3d at 57–58 (emphasis added)
Monopoly Power: Direct Evidence
“Monopoly power is the **power to control prices** or exclude competition.”

Q. A monopolist who sells things through an auction could control the auction’s outcome by changing the design of the auction itself?
A. There could be ways to do that, yes.

* * *

Q. A monopolist who sells things through an auction could influence the auction’s outcome by changing the algorithm that runs the action; is that right?
A. Well, yes. If he changes the algorithm, you get a different answer.

Q. Finally, sir, a monopolist that wanted to influence the result of an auction would have a number of levers that it could use, correct.
A. Correct, yeah.
Q. And Google has **pricing knobs or tunings** that it can use to impact search ad pricing; correct?

A. Yes.

---

Q. And you defined a **tuning as a mechanism by which the weights in the auction function are adjusted**. Would you agree on that?

A. That sounds reasonable to me.

Q. **Tunings can impact pricing**, correct?

A. They can.
Q. So, yes, ads quality sometimes does try and raise prices.

A. I would describe it less as raising prices and more coming up with better prices or more fair prices, where those new prices are higher than the previous ones.
“Code Yellow”: A Call For More Revenue

“[C]alling a code yellow for Search revenue starting today. We’ve seen steady weakness in the daily numbers and are likely to end the quarter significantly behind if we don’t turn things around.”

“The timing of our revenue launches is slightly behind where is was last year.”

UPX2043 at -063 (emphasis in original) (emphasis added in red).
Jerry Dischler
VP & General Manager, Google Ads

Q. And in some of the launches you recall have increased prices 5 percent; is that correct?
A. Yes; for the typical advertiser, yes. With every advertiser, every advertiser behaves differently. So I’m not going to say across the board.

* * *

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.
Q. Sir, would you agree that Google has raised search ad prices by 10 percent for some queries? Correct?
A. By 10 percent for some queries? It’s possible, yes.

* * *

Q. Would [Google] keep enough advertisers so that [its] revenue would go up if [Google] implemented a 15 percent increase?
A. I imagine that’s what the author would say, yes.
Q. Do you have any reason to think that that’s not true?
A. No.
Q. Yes or no, did you give that answer?
A. That is the answer I gave on September 28, 2020, yes.

Tr. Testimony
Q. Now, prices for Google's ads have risen over the past decade; is that right?
A. Overall -- nominal prices on average, I think it's fair that they have gone up. It depends a lot on what you look at and what index you use, but I think it's fair that on average, they've gone up.

Tr. Testimony
Search Ads Price Increase: CPCs More Than Doubled

Google’s Search Ads Price Index, PCs and Mobile Phones (US)

PCs
Mobile Phones

REDACTED FOR PUBLIC FILING
Search Advertising Is Incredibly Profitable

Adrian Perica
VP, Corporate Development

“[T]here aren’t so many businesses on the planet that have such high marginal profit on incremental revenues.”

Dr. Sridhar Ramaswamy
Former CEO & Founder at Neeva; Former SVP, Ads/Commerce at Google

“[S]earch is one of the most profitable businesses ever.”

Nick Fox
VP, Product Management

“What are our superpowers? . . . . Resources: our core business (Search) is incredibly lucrative ... providing endless capital....”

UPX0635 (2018)

Tr. Testimony

UPX0275 (2021)

REDACTED FOR PUBLIC FILING

UPX0635 at -352 (emphasis added); Tr. 3796:5–3798:22 (Ramaswamy (Neeva)); UPX0275 at -078 (emphasis added).
Google Can Ignore “Fundamental Laws Of Economics”

“Search Advertising is one of the world’s greatest business models ever created . . .”

“Part of what has been so amazing about that is that we’ve essentially been able to ignore one of the fundamental laws of economics – businesses need to worry about supply and demand[.]”

“Sure, we had to build the best product, made smart marketing/distribution investments to get our product everywhere, but we could essentially tear the economics textbook in half[.]”
Q. And this chart shows that between the years 2010 and 2018, the ... Search Ads team consistently met the OKR for revenue growth in the neighborhood of 20 percent; correct?

A. Yes.

Tr. Testimony
RPM has become the dominant growth driver

Maintained ~20% Y/Y growth over several years

RPM gains making up for diminishing query volume contribution

Monetisation gains now driving majority of revenue growth

1. In 2018: \( \text{Red.} \) of growth driven by RMP, however that gets to \( \text{Red.} \) when we adjust for country mix

>> What’s the source of the RPM strength?
"If we don’t hit plan . . . we miss the street’s expectations again . . . so we get punished pretty badly in the market. We are shaking the cushions on launches . . . ."

Jerry Dischler
VP & General Manager, Google Ads

Q. Part of your goal of shaking the cushions was to find more revenue for Google; correct?
A. My goal was to get creative so that we could try to make our quarter, yes.

Tr. Testimony
Google’s Steady Increase In Search Ads Revenue

First off we wanted to remind you that we are all part of a most amazing business. Search Ads + O&O has grown at an incredible rate over the past decade - typically in the high teens - reaching $93B last year, and despite covid - we’ll exceed $100B this year. You can see that the vast majority of our growth has come from Mobile search - especially in the last 5 years.
Desktop has largely plateau-ed, while AFS has declined.
And just in the last couple years - you can see O&O like discovery and gmail starting to really contribute.
Google Search+ High Margins And Profits Are Durable

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- Search Ads revenue exceeds $150 billion today
- Gross margin exceeds %
- Operating profit exceeds %

Redacted

Sources: UPX0490 (Total Ads Annual tab, Column J), UPX0491 (Total Ads Annual tab, Columns H, I, J), UPX0492 (Total Ads (Mkt) tab, Columns I, J, K), UPX0493 (Total Ads (Mkt) tab, Column J)

USDOJ/GOOG-001859774.001
Monopoly Power: No Consideration Of Competitor Pricing
Monopoly power exists where a firm sets prices "without considering rivals' prices, something a firm without a monopoly would [be] unable to do."

*United States v. Microsoft*, 253 F.3d 34, 57–58 (D.C. Cir. 2001)
“As a general matter, Google does not regularly or systematically compare ‘the relative pricing’ of different Google digital advertising products, nor does Google regularly or systematically compare ‘the relative pricing’ of ‘Google search advertising’ to advertising provided by different sellers.”
Q. Sir, you’re not aware of anyone at Google doing any analysis of Bing’s auction model; correct?
A. No one immediately comes to mind.
Q. You’re also not aware of anyone at Google ever doing any analysis of pricing of search ads at Bing; correct?
A. Nothing immediately comes to mind.
Jerry Dischler  
VP & General Manager, Google Ads

“**We never really had market pressure to clean up advertising . . . .**”

**Message**

From: Jerry Dischler
To: [Redacted]

Subject: No market pressure to clean up advertising

**Jerry Dischler,**

VP & General Manager, Google Ads

We never really had market pressure to clean up advertising. If there are being consistent payers, we have a problem...

On Apr 23, 2016 at 12:19 PM, [Redacted] wrote:

Jerry Dischler, got your message. We will bring this up at 3:1.

On Apr 23, 2016 at 11:21 AM, [Redacted] wrote:

Jerry Dischler, got your message. We will bring this up at 3:1.

Jerry, [Redacted] and I will be in LA this week, but were having a meeting to discuss this.

On Apr 23, 2016 at 11:01 AM, [Redacted] wrote:

Jerry, [Redacted] and I will be in LA this week, but were having a meeting to discuss this.

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[Redacted for public filing]
Q. THE COURT: So is there any variable in the algorithm that takes into consideration the cost of advertising on other digital platforms?

A. THE WITNESS: No. I don’t think we would know with enough confidence what that would be at the auction level even if we wanted to do so, but no, I can’t think of anything like that.
Q. Was competition with Facebook for advertisements something you would consider when deciding whether to enact a particular user interface launch at Google?

A. [T]here are so many factors that go into a user interface launch. . . . I don’t think we looked at Facebook’s ads as -- so broadly, not really.
“Japan is unique, we have a big competitor unlike US and UK.”

* * *

“JP [Japan] is unique among our major countries in the sense that we have a player who competes against us head-to-head, Y!J . . . Advertisers split their search budget to Y!J and Google, which makes auction pressure on Google less.”
Monopoly Power: Market Shares
Market share of 60-65% meets “the levels that courts ordinarily find sufficient to establish monopoly power.”

Monopoly Power: Market Shares

Shares Of Search Ads Revenue (US)

- Google
- Bing
- Other


UPXD102 at 63.
Agenda

1. Google Has Monopoly Power In Search Advertising
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3. Text Ads Is A Relevant Product Market
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REDACTED FOR PUBLIC FILING
Market Definition: Search Advertising
“Congress prescribed **a pragmatic, factual approach** to the definition of the relevant market and not a formal, legalistic one.”

*Brown Shoe Co. v. United States*, 370 U.S. 294, 336 (1962) (emphasis added)

Expert conclusions on relevant market must be **“consistent with the business realities”** of a company.


“[T]he relevant market must include all products **reasonably interchangeable** by consumers for the same purposes.”

*United States v. Microsoft Corp.*, 253 F.3d 34, 51–52 (D.C. Cir. 2001) (emphasis added) (cleaned up)

“[C]ourts look at whether two products can be used for the same purpose, and, if so, **whether and to what extent purchasers are willing to substitute one for the other.**”

Not Reasonably Interchangeable
“[A]lthough it is literally true that, in a general sense, cash and checks compete with general purpose cards as an option for payment by consumers . . . cash and checks do not drive many of the means of competition in the general purpose card market.”


“[T]he mere fact that a firm may be termed a competitor in the overall marketplace does not necessarily require that it be included in the relevant product market for antitrust purposes.”

*FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 26 (D.D.C. 2015) (cleaned up)

“[W]hile providers of all tax preparation methods may compete at some level, this does not necessarily require that [they] be included in the relevant product market for antitrust purposes.”


“At a high enough price, even poor substitutes look good to the consumer.”

*United States v. Eastman Kodak Co.*, 63 F.3d 95, 105 (2d Cir. 1995) (emphasis added) (cleaned up)
“In other words, the existence of a larger market within which two products compete does not necessarily mean that they are reasonably interchangeable substitutes for one another. In this case, there is undeniably a broader market for digital healthcare advertising in which programmatic, social media, and endemic websites all participate. But the viability of such additional markets does not render the one identified by the government unusable.”

*FTC v. IQVIA Holdings Inc.*, 2024 WL 81232, at *24 (S.D.N.Y. Jan. 8, 2024) (emphasis added) (cleaned up)
Market Definition: Search Ads
Brown Shoe Factors

- Peculiar characteristics and uses
- Distinct prices
- Industry or public recognition of the market
Q. Could we focus on search advertising for a moment? How do you define “search advertising”?
A. Search advertising can be defined as advertising that you buy in response to people conducting a search on a search engine or platform.

Q. . . . A search ad is an advertisement that’s displayed on a search engines result page in response to a user query; correct?
A. Yes.
“[T]here is a market for search advertising of course.”
A. [P]aid search is . . . an always-on channel so we call it like an evergreen media channel, where we capture demand year-round, whereas other[] channels, like paid social, operate on a campaign timetable so a campaign has a beginning, a middle, and an end.

* * *

Q. And when you say always on, what does that mean?
A. Every day of every week of every month year-round.
Search Ads Are Constant
Search Ads Are Not Substitutable

Joshua Lowcock
Global Chief Media Officer
IPG

Q. Mr. Lowcock, could you explain the differences in your mind between “search” and “display” and whether or not they are substitutable from your perspective in your business?
A. Display advertising is primarily to drive awareness, what we would call brand advertising. Search advertising is lower funnel, primarily intended to capture intent. I would not consider them substitutable.

* * *

Q. Mr. Lowcock, could you please explain whether you consider any particular ad inventories or platforms to be must haves for an online ad campaign?
A. I would go so far as search would be mandatory in any advertising campaign.
A. . . . Back to earlier part of the testimony, search ads are unique in the sense that somebody is going and initiating the action, going to Google, going to Bing, asking for solutions to -- asking for a solution.

Tr. Testimony
Search Ads Are A Unique Channel

Discovery ads strategy (ACM)
June 5, 2020

Discovery ads provides a familiar pitch to social buyers

Beyond Search and Display buyers, Google can now access social budgets and creatives
Discovery’s lift and shift strategy brings social campaigns for feed surfaces and drives higher marginal ROI for social buyers using Search Intent

Discovery ads
Market Definition:
Search Ads Pricing
Q. And in some of the launches you recall have increased prices 5 percent; is that correct?
A. Yes; for the typical advertiser, yes. With every advertiser, every advertiser behaves differently. So I’m not going to say across the board.

* * *

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.
A. What they did is they artificially lowered or raised prices to advertisers, and they looked to see what happened to ad revenue.

* * *

A. And the bottom line on this that they came to was, if we -- basically there's what they called a stickage of 50 percent. So if they raised prices 10 percent, revenue would go up 5.

* * *

A. So, yes, there was some reduction in advertising, but it was low enough that raising prices was profitable, and that's what convinced them that they could do this.
Gamma Yellow: 20% Price Increase Was Profitable

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

- 10% is believed to be safe
  - WoW noise is high (50% by spend seeing more than 10%).
  - We’ve launched things at 15% and heard nothing.
  - GY was 20% on mobile on average.

- Redacted: one way to phrase this is that under perfect prices, 1 penny less than the breaking point is the right amount. The advertiser is currently paying at least 20% less than their willingness to pay.

UPX0036 at -063–64, -067 (emphasis added).
“Reassuring Piece of Evidence” Price Increases Stick

“The AION long term AE was in that regards a key reassuring piece of evidence showing that Redacted spend stickage to a detectable price increase matched shorter 6 week responses, while the CX Lab ROI study confirmed that advertisers do indeed detect and react to changes within these time frames.”
Agenda

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REDACTED FOR PUBLIC FILING
Market Definition: Brown Shoe Factors
Brown Shoe Factors

- Peculiar characteristics and uses
- Distinct customers
- Distinct prices
- Industry or public recognition of the market
Q. . . . PLAs are a **different species** than text ads; is that right?

A. Yes.

*Tr. Testimony*
Q. Sir, UPX12.005, is this an example of a text ad?
A. It is.
Q. And a text ad contains the ad content and the text including possibly one, the URL, two, one to three headlines, and three, a one to two description line; is that correct?
A. That's correct.

Q. What is a text ad?
A. …So a text ad is just simply text, there’s no image, there’s no video, it is text only.
Text Ads Give Advertisers More Control

Q. Would you agree that a text ad gives an advertiser more control when their ad appears on a search engine results page?
A. It does.

Q. For a text ad, an advertiser can select a set of keywords to direct the text ad to appear in response to specific user queries?
A. A specific set of user queries, yes.
Q. But for a shopping ad, the advertiser does not select keywords that will respond to a query; correct?
A. That's correct.

Tr. Testimony

Q. With text ads, the advertiser gets to choose the creative element in the ad?
A. Yes.

Q. With text ads, the advertiser can identify the distinctions in their product versus other companies?
A. Yes.

Q. With shopping or -- shopping ads, or PLAs, advertisers do not get to choose the creative in the ad?
A. Okay.
Q. True?
A. I believe so.

Tr. Testimony

REDACTED FOR PUBLIC FILING
### Jerry Dischler
**VP & General Manager, Google Ads**

**Q.** And the majority of advertisers on Google cannot buy shopping ads or PLAs because they’re not actually selling physical products; correct?  
**A.** That’s correct.

---

### Tracy-Ann Lim
**Managing Director, Chief Media Officer**

**Q.** And why does JPMorgan Chase not buy product listing ads or shopping ads?  
**A.** We, for the most part, represent intangible products and services.  
**Q.** So is it the case that the only search-related ads that JPMorgan buys are search text ads?  
**A.** Yes.

---

**REDACTED FOR PUBLIC FILING**
Jerry Dischler
VP & General Manager, Google Ads

Q. The majority of advertisers on Google purchase text ads, correct?
A. That's correct.

Q. The majority of revenue that Google earns is from text ads, correct?
A. Yes.

Tr. Testimony
Distinct Prices: Separate Auctions

**Dr. Adam Juda**  
**VP, Product Management**

**Q.**  
Google runs an ad auction for text ads, correct?

**A.**  
We do.

**Q.**  
And Google runs a separate ad auction for shopping ads, or PLAs correct?

**A.**  
That is correct.  
*Tr. Testimony*

---

**Joshua Lowcock**  
**Global Chief Media Officer**

**Q.**  
And when shopping ads are sold in an auction, is that the same auction or a different auction than the auction for text ads?

**A.**  
It’s a different auction.

**Q.**  
How does the auction for shopping ads differ from the auction for text ads?

**A.**  
They’re two separate auctions.  
*Tr. Testimony*

---

**Jerry Dischler**  
**VP & General Manager, Google Ads**

**Q.**  
And I believe you stated that the auction for text ads is different than the auction for shopping ads or PLAs; correct?

**A.**  
It is.

**Q.**  
They’re completely separate auctions; correct?

**A.**  
They are.  
* * *

**Q.**  
And since text ad auctions and shopping auctions are separate, any changes to the pricing in one auction does not impact the pricing of another auction; correct?

**A.**  
That’s correct.  
*Tr. Testimony*
“[T]he hypothesis is that PLA’s are good experience on shopping queries, however, the cpc’s on PLAs aren’t comparable to text ads. Today these two formats are siloed in their own world and don’t compete, it will be worth looking at pricing from that point of view.”
Q. And, Mr. Lowcock, if the price of Google’s text ads increased by 5 percent, would you recommend to your clients to move their ad spend elsewhere?
A. No.

* * *

Q. Have you seen a trend with respect to the CPCs of Google’s text ads?
A. There has been an increase in price of CPC on text ads.

Q. And have your clients moved their ad spend away from Google Search?
A. No.
Q. And just to drive down on this point, what is it that makes paid search text ads versus digital display ads not fungible?

A. They exist for a different reason. . . .
"Using Google as our frame of reference, ‘search’ refers to two distinct products: **Shopping Ads** (f.k.a. Product Listing Ads) and **Google Ads** (f.k.a. AdWords). These two units are distinctly different in both how they are bought and consumer experience."
Agenda

1. Google Has Monopoly Power In Search Advertising
2. Search Ads Is A Relevant Product Market
3. Text Ads Is A Relevant Product Market
4. Google’s Price Increases Harmed Advertisers
5. Google Failed To Prove Procompetitive Justifications
Advertiser Harm: Google Manipulates Auction Pricing
“[T]he material consideration in determining whether a monopoly exists is . . . [if] power exists to raise prices or to exclude competition when it is desired to do so.”

Am. Tobacco Co. v. United States, 328 U.S. 781, 811 (1946) (emphasis added)
Pricing Knobs “Extract Value More Directly”

When Vanilla pricing may no be sufficient

Second Pricing works great most of the time, but there are failure scenarios

- Weak or lack of Auction Pressure
  - When no competition is present, or when competition is of inferior quality
- Reserve pricing
  - Reserve prices are generally lower than their second price counterparts

We need a way to extract value more directly

→ We need pricing mechanisms with pricing knobs
Google Manipulates Search Ad Pricing

"What are we tuning again? Prices!"
Google Raises Prices Through “Intentional Pricing”

“We also directly affect pricing through tunings of our auction mechanisms, in general through the three levers that are format pricing, squashing or reserves. We’ll call this ‘intentional’ pricing.”
1. Format Pricing
2. Squashing
3. rGSP
Advertiser Harm:
Format Pricing
Q. And do you agree that format pricing is just one of the pricing knobs that Google has to adjust the search ads auction?

A. Yes.
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
“Prices should go up . . . GammaYellow: Prices could be higher, and we think we would keep the money[.]

* * *

“Most gains in Top-1, where we have no way to say what formats should cost . . . Format pricing is our best knob to engender large price increases[.]

REDACTED FOR PUBLIC FILING
Q. For the typical or average advertiser, there was a price increase as a result of the momiji launch; correct?

A. For the typical advertiser, I believe the answer is yes, but as advertisers are fond of telling us, none of them are typical.

Tr. Testimony
“There will be no proactive communication of this change, and no comm doc or impact list will be shared with sales.”
Google’s Search Ad Auction Is A Black Box

Google’s Ad Serving System

Query, Geo-location, Language, Other user preferences

Ads to show, order to show them in, price to charge per click
Advertiser Harm: Squashing
Pricing Knob #2: Squashing

“It is a pricing knob which increases an advertiser’s LTV based on how far their pCTR is from the highest pCTR on query.”

“[W]orking on using it to engender a more broad price increase.”
A. [W]hat they would do is they would take . . . the bidder who had the second highest predicted clickthrough rate, and, in essence, in the formula for the auction, boost that ranking of that. And why? To basically raise the price against the highest bidder.
“recover lost revenue from launches which create value for our users and advertisers, but reduce revenue for Google”
Q. And Google has implemented squashing in its text ad auction dynamics; correct?
A. It has.

Q. And one of the effects of squashing text ads is that the top winner of the auction pays more; correct?
A. In some cases, yes.

Q. On average, the winner pays more; correct?
A. On average, yes.
A. [Google is] *introducing inefficiency into the auction*. . . . [T]hey’re willing to do that because it helped them extract more out of the highest – the advertiser most likely to win – the top advertiser. . . .

*Tr. Testimony*
"Negative User Experience" And "Negative Impact" On Quality

"negative user experience consequences"

"negative impact on the long term incentives for advertisers to improve quality"
“Another way of doing revenue-efficiency tradeoff:

**Rank ads sub-optimally in exchange for more revenue.**

(emphasis added)
Advertiser Harm: “Randomized” GSP
“[It] introduces a probability of swapping ads as their scores get closer . . .”

“It avoids the creation of feature opt-out incentives common with mechanisms that are tied to ad features (e.g. format pricing), better embedding pricing into our auction.”

“It provides the high efficiency and large tuning range we need to accommodate Ads Quality tuning needs going forward.”
RGSP Is “A Better Pricing Knob”

“A better pricing knob than format pricing”

“Would likely replace format pricing”

“Initial impact of 10+% RPM with the current tuning knob”
Randomization we can explain to advertisers

Background

There are two importantly measurable actions we took in the integration of RGSP into the local search results: (1) we now display local search results in a random order, and (2) we no longer display local search results based on the user's search history.

Average Position – The average position of a local result is displayed on the page and for the keyword that the user searched for. This is calculated by taking the average of all the positions of a local result on the page, divided by the number of unique positions. For example, if a local result is shown on the page in the second, third, and fifth positions, the average position is (2 + 3 + 5) / 3 = 3.

Impression Share – Impression share is an index that measures the advertiser's success. Our legal department requires us to report this share to our advertisers as fast as possible. However, based on a high frequency and limited inventory of impressions (and the resulting cost of advertising), we must make sure that the position sharing is not publicized. This requires that the positions be hidden by 8", where this is the number of impressions are associated with our RSP in this position.

Click Through Rate (CTR) – 80% of all impressions (and only 80% of the impressions measured windows). The current version of this index needs to be emphasized by reducing the maximum display position of the RSP. This is currently fixed to 1 and 3. Clicks can also be measured in other coverage.

What are some interesting things that we've learned?

- The positions displayed right now are based on the highest position (and this does not change if the page is refreshed). This is in alignment with our position data and the AdWords Realtime. This gives us the feedback to do things this way.

Requirements

We need to inform advertisers on our goal and the advertisers position as far in advance. The ability to have a specific position on the page (and the ability to change it) is important. We will make sure our content and information is updated for future demands.

What all advertisers expect?

- A specific position in local serps
- A specific position on the page of Google
- An explanation of the reason for the change is non-discussing in this project.

“Randomization we can explain to advertisers”

- Easy to tune, with the ability to raise prices (shift the curve upwards or make it steeper at the higher end) in small increments over time (AKA ‘inflation’).
- We don’t want to have to say ‘we randomize’ – that will have perception problems.”
Q. rGSP was a launch that was incorporated into the Google ad auction in around 2019; is that correct?
A. Seems right.

* * *

Q. But if they enter the ad auction in any way, they’re subject to rGSP; agreed?
A. rGSP is how the auction works today, yes.
RGSP Manipulates The Ad Auction

Google Influences the Outcomes of Its “Black Box” Auctions

Pricing Knob: rGSP

Google artificially inflates Ad Rank of Runner-Up
- e.g., Winner’s Ad Rank is 32; Runner-Up’s Ad Rank was originally 20; Google inflates Runner-Up’s rank to be above 20

Winning Ad may lose
- Depending on difference in Ad Ranks of the Winner and Runner-Up, Google may switch their ad positions, e.g., Runner-Up ad in 1st position and Winning Ad in 2nd position

Winning Ad’s price increases
- When Winning Ad is not swapped, inflated Ad Rank of Runner-Up ad results in higher price of Winning Ad
- Winning ad’s price
  - is not based on Runner-Up ad’s actual bid or Ad Rank
  - is now set at amount needed to equal inflated Ad Rank

Prof. Kinshuk Jerath
Plaintiff Expert
Prof. of Marketing, Columbia Univ.
Q. Okay. So one of the things that rGSP does is, it says if you are bidding high enough, you don't have to worry about the swap, correct?

A. I think -- I mean, I think it *incentivizes advertisers who have a high value on the spot to bid higher if they put a high value on the slot.*

*Tr. Testimony*
RGSP Does Not Improve Quality

“[I]s there any component of quality?”

“Does not directly touch quality.”

“Does exploration lead to better quality?”

“[H]aven’t seen that it does[.]”
1. Google Has Monopoly Power in Search Ads & Text Ads
2. Search Ads is a Relevant Product Market
3. Text Ads is a Relevant Product Market
4. Google’s Price Increases Harmed Advertisers
5. Google Failed To Prove Procompetitive Justifications

REDACTED FOR PUBLIC FILING
<table>
<thead>
<tr>
<th>Defendant’s burden to “show” a sufficient justification for its conduct, “specif[y] and substantiate . . . [its] claims.”</th>
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<tbody>
<tr>
<td>United States v. Microsoft Corp., 253 F.3d 34, 59, 66 (D.C. Cir. 2001)</td>
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<tr>
<td>“The Government, having demonstrated harm to competition, the burden shifts to Dentsply to show that [its exclusionary contractual provision] promotes a sufficiently procompetitive objective.”</td>
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<tr>
<th>“This burden-shifting has evolved based on which party has access to the various categories of evidence and information, with any evidence of pro-competitive justifications likely to be under the defendant’s control.”</th>
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<tbody>
<tr>
<td>Viamedia, Inc. v. Comcast Corp., 951 F.3d 429, 464 (7th Cir. 2020)</td>
</tr>
<tr>
<td>[T]he “procompetitive benefits” argument is the centerpiece of Meta’s affirmative defense to the FTC’s claims. . . . [B]ecause it is an affirmative defense, Meta will bear the burden of proof on the issue.</td>
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</tbody>
</table>
Quality Adjusted Price
"After years of reserve work, we still aren’t able to say what an advertiser’s value is.

We aren’t really detecting value, we are finding ideal reserve for click loss trade-off. So, it’s another revenue efficiency knob[.]"
"If we had good estimates of the following two values for each ad, then we could simplify the system and pretty much call it a day:

- Blindness cost (or sightedness value) of the ad
- Advertiser value per click

We’ve tried to get good estimates on both of these values but have been unsuccessful."
Google Chooses Revenue Over Quality

Dr. Adam Juda
VP, Product Management

“Within ClickQuality, I think the general belief is that we’re likely showing more low quality ads that we ought not be showing relative to high quality ads that are not making their way through to the auction.”

“Auction / Pricing . . . The general belief here is there is more juice in getting prices right (higher) than in improving the allocation of ads.”
Q. Right. You don’t try to determine what portion of nominal price changes is due to changes in quality; is that correct?

A. I mean, I report what Google has done in measuring that. I don’t do a separate econometric study.

Tr. Testimony
“In early 2018, members of Google's ad auction team began what they called a ‘holistic pricing project.’ During this effort, the ads team tried to measure and track something they called ‘Excess CPC.’ . . . Google paused the holistic pricing project and the associated adjustments in late 2019.”

Dr. Mark Israel
Google Expert, Compass Lexecon

A. [Excess CPC] is Google's metric that they reported over time. I think they last reported a value in 2020. . . . [I]t was their attempt to . . . measure something like a quality adjusted price.

Tr. Testimony
Expanded Keyword Matching
Expanded Matching Reduces Advertiser Control
A. [T]his makes it easier for advertisers to enter auctions, but much more difficult for them to not enter these auctions. So on average, that would lead to thicker auctions, exactly as [the Court] said, and thicker auctions means more higher prices.
Q. An outcome of semantic matching is thicker auctions, correct?
A. Yes.
Q. And all else equal, more advertisers in an auction tend to lead to a higher price?
A. ... I think it’s probably true on average...
**Match-Type Expansions Increase Prices**

![Google Search](Image)

**Semantic Exact and Close Match**
Current targeting analyses

**Examples: increased auction pressure**

<table>
<thead>
<tr>
<th>Query</th>
<th>Baseline</th>
<th>Experiment</th>
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<tr>
<td></td>
<td>KW: Reduced</td>
<td>KW: Reduced</td>
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<tr>
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<td>$0.23</td>
<td>$5.81</td>
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“[C]overage increase also leads to denser auctions and higher CPCs . . .”
Match-Type Expansions Increase RPM

- Keyword targeting has delivered steady gains
- Semantification of match types started in 2012 with close variants & full semantic exact in 2018
- We will continue to harness gains from expansion and semantification using ML
Q. Advertisers do not have the ability to opt out of semantic matching, correct?

A. That’s correct.

Tr. Testimony
“[l]t is like being in the ring with a sumo wrestler, with the lights turned off. We just have to keep our heads down and work hard to innovate our way to the next level.”
Search Query Reports
“Massive Decrease In Query Visibility”

“Google moved to reduce the queries included in Google Ads search terms reports, thereby limiting advertiser visibility into the specific queries driving ad traffic.”

“This is a massive decrease in query visibility, making it more difficult for paid search marketers to effectively identify poor-matching queries to weed out via keyword negatives.”

UPX0987 at -125–26 (emphasis added).
“See below – one of the more egregious examples of Google removing transparency from advertisers under the banner of ‘privacy’, IMO. **Search Query data has always [been] anonymized and aggregated.**"
Q. . . . [D]o you recall any conversations with Google about whether there are privacy issues with regard to the data that you referred to as obfuscated in Exhibit 4?

A. I have no recollection of conversations regarding privacy concerns in the search query report data prior to this change.

Des. Testimony

Des. Tr. 260:16–22 (James (Amazon)).
“While a query can contain sensitive information . . . queries are not PII . . . ”
A. [F]or 20 percent of their spend on Google, the advertisers were not even told which queries they’re buying . . . . [T]his is like if you buy a product in a supermarket but they don’t tell you what you actually bought. . . . You should be entitled to know that at least this is where I spent my money.
ROI
ROI ≠ Substitutability
ROI “Within” Not “Across” Channels

“[W]e should be more concerned about the perception of price / ROI changing within a channel rather than actual cross channel ROI comparisons.”

* * *

“[C]ross channel ROI comparisons appear to still be extremely difficult today, even for major players[.]”

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Q. Right, but the simple fact that different things have the same ROI, that doesn’t tell us whether they’re in the same antitrust model?

A. I agree with that entirely. . .
Complements Not Substitutes

Prof. Kinshuk Jerath
Plaintiff Expert
Prof. of Marketing, Columbia Univ.

A. [M]oney is moved from one channel to the other, [but] that does not mean the channels were substitutes. . . .

* * *

A. [M]oney has been moved from search to display, but not because the channels are substitutes or interchangeable, rather, because the channels are complementary and mutually reinforcing. . .

Tr. Testimony

REDACTED FOR PUBLIC FILING
Different Channels Are Complements, Not Substitutes

What’s a commercial journey, and why do we care?

Conceptual definition: A commercial journey is any journey that eventually results in a real-world transaction.

Examples:
- Shopping for a new suit for an upcoming wedding
- Buying a used car and transferring the title
- Taking piano lessons to pick up a new hobby
- Diagnosing an MCL sprain and finding an orthopedic doctor
- Relocating to a new city and looking for apartments

Commercial journeys have traditionally been underserved in organic Search, but they’re some of the most important and friction-filled user needs.
Q. Does your team shift ad spending that frequently between display and Google?
A. Sorry, you’re talking about shifting money from display buying over to Google.

Q. Or Google to display on a daily basis?
A. No.

Q. What about any social platforms?
A. No. I would say our Google and Bing investments are pretty much interchangeable but distinct and separate from social or display.

Tr. Testimony
Q. And do you typically **shift the spend between search text ads and digital display ads** based on the – if the relative cost of those ads would change?
A. **No**.

Q. And why is that?
A. Paid search budgets are for paid search only. . . . They are distinct and different and separate. . . .

Q. And distinct in what way?
A. **They are not fungible**.

* * *

Q. Do you typically **shift ad spend between search text ads and social ads** based on changes in relative cost of those ads?
A. No.
Q. The engine will recommend moving spend from one ad format to another in order to improve ROI; fair?
A. Yes. It also talks about -- I mean, all in-channel optimization.

Q. If you learned that the ROI on Bing search text ads was greater than the ROI on Google Search text ads, could you switch all of your search text ads spending to Bing?
A. No. Our spend with Bing maxes out where their volume ends…[s]o once we max out there…there's no where else to go.

Tr. Testimony

Joshua Lowcock
Global Chief Media Officer

Tracy-Ann Lim
Managing Director, Chief Media Officer

Tr. 3958:10–3958:14 (Lowcock (IPG)); Tr. 4875:19–4876:4 (Lim (JPMorgan)).
Search Ads Are Constant

FLIGHTING APPROACH:

- Digital Video
- Social
- Display
- Search

Credit Event: Home Sale and Women’s Spring Style
Credit Event: Home Sale and Women’s Spring Style
Friends and Family & Super Saturday Sales
Credit Event: Women’s Essentials & Footwear

Launch
Build Cookie Pools with an initial brand burst
Retarget
Reengage users with EVRI and close sales
Continue to Engage

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Google Discovery Ads
Google Discovery Ads Are Social Ads

Discovery ads launched, allowing advertisers to extend the reach of their social ads to 2.9B+ Google users

- Positioning
  - Discovery ads reach 2.9B people across Discover, YouTube and Gmail worldwide. Simply reuse your social assets to drive performance.
- Trajectory
  - Open beta announced at GML in May 2019
  - Current: $836M 7-day ARR, Goal: $1.4B ARR
  - Q1 Booked revenue $165 M surpassing target ($160M) despite COVID-19
  - Active Advertisers: 20K
  - Early signs demonstrating some proof that "lift and shift" strategy is working. Case Studies
  - 4/28 GA: Silently launched to 100% of Google ads advertisers
  - 5/27: Publish blog posts and UI alerts to drive adoption

*except Discover users in FR/DE/AU
Google Discovery Ads Are Social Ads

Discovery ads provides a familiar pitch to social buyers

- $150BN spend from Search and Display buyers
- $80BN Incremental Social budgets

Display Buyer
- Drive performance across publisher sites
- Display
- DV360

Search Buyer
- Capture a person's declared intent
- Search
- Shopping
- Unilever
  (JAC, ULB, 65C, SDC, TV4A)

Social Buyer
- Create intent, find new customers
- Discovery ads

Beyond Search and Display buyers, Google can now access social budgets and creatives
Discovery's lift and shift strategy brings social campaigns for feed surfaces and drives higher marginal ROI for social buyers using Search Intent

REDACTED FOR PUBLIC FILING
Q. . . . Demand Gen ad campaigns, like Discovery ad campaigns, are aimed at social buyers; right?
A. At buying -- are aimed at the latent intent that Facebook, Instagram, TikTok, and others are capturing, yes.

* * *

Q. Do you see. . . the headline is ‘no evidence of cannibalization with existing campaigns’?
A. I do.
Q. And that's saying that the Discovery ads campaigns aren’t cannibalizing what you're getting from Search ad campaigns; right?
A. Correct.
Nike Facebook Boycott
• Search Ad spend was effectively constant.

• Facebook Ad spend was primarily reallocated to Display Ads during pause period.

• Additional investment in Search Ads remained post pause period.
Ad Clicks Is A Flawed Proxy For Quality

• Trend line of ad clicks is not a proxy for quality.
• Decreasing organic clicks does not imply quality improvements.
• No evidence clicks alone equal quality.
“[A]dvertisers care, in the end, about conversions/purchases, not clicks.”

Sundeep Jain

A. Redacted

. . . [W]e can't draw the correlation on the click. We have to draw the correlation to the quality of the post-click experience.

Tr. Testimony