

Alphabet




Alphabet Inc. (GOOGL / GOOG)

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Find Me Value Investment Research LLC

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"GOOG/L" Snapshot



Alphabet Inc. (GOOGL / GOOG)

**as of 5/11/2020*

Stock Price	\$	1,404.00
S/O		682.62
Market Cap	\$	958,397
Cash & Equivalents	\$	117,229
Debt	\$	5,016
Net Cash	\$	112,213
Enterprise Value	\$	846,184
Cash Per Share	\$	162.09

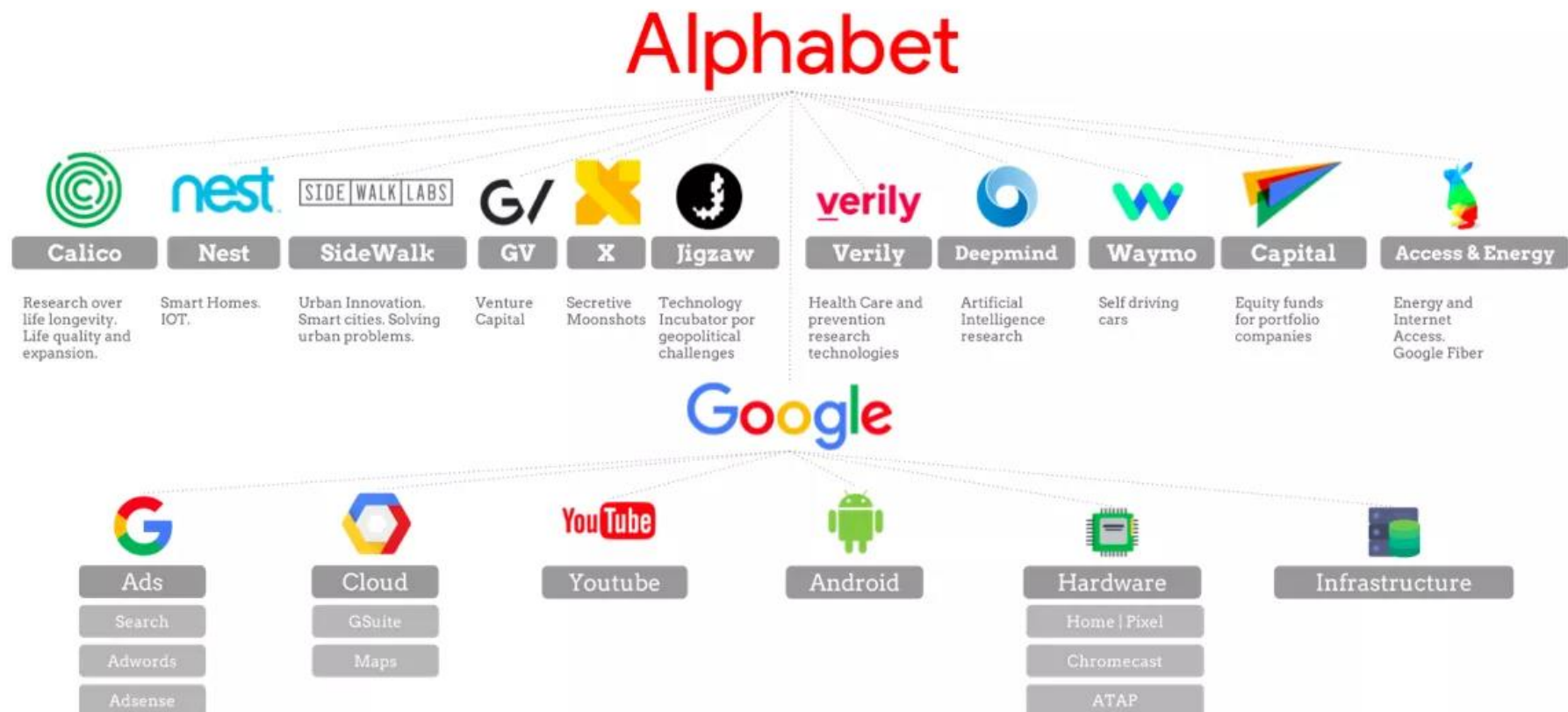
	TTM #'s	Per Share	Value
Revenues	\$ 161,857	\$ 237.11	5.2 x
EBITDA	\$ 49,406	\$ 72.38	17.1 x
FCFF (pre-Tax)	\$ 24,161	\$ 35.39	35.0 x
FCFE (CFO - PP&E)	\$ 29,056	\$ 42.57	33.0 x
FCFE -to-EV	\$ 29,056	\$ 42.57	29.1 x
"Core" EBIT	\$ 40,677	\$ 59.59	20.8 x







Alphabet = “Core” Google vs. “Other”



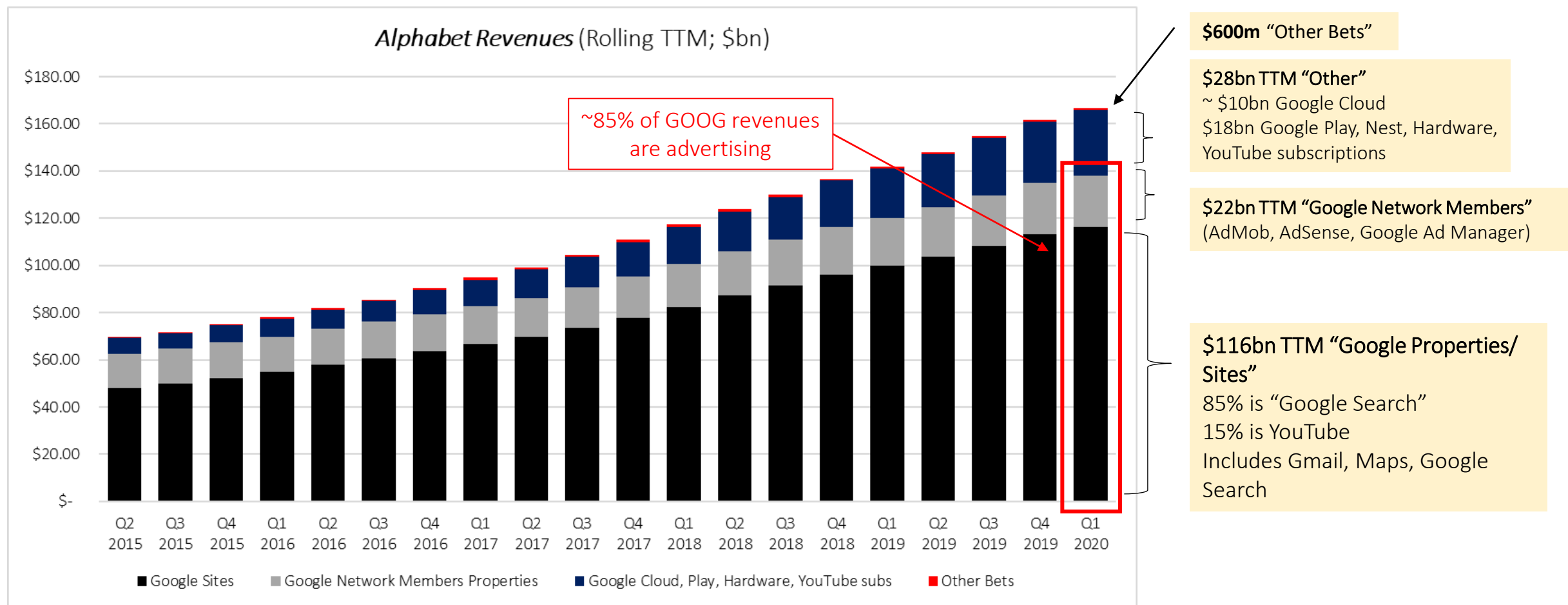


Business Overview

- Google dominates in utilizing its services – search, Maps, Gmail, YouTube – to drive advertising revenues. Google has made \$138bn in advertising revenues TTM, which is 83% of total revenues
 - Google Search properties, including traffic generated by search distribution partners who use Google.com as their default search engine in browsers, toolbars, etc. (\$99bn, growing ~10-15%)
 - Gmail, Google Maps, etc.
 - YouTube (\$17.2bn, growing >30%) – online video site
 - Google Network Members (AdMob, AdSense, Ad Manager; \$22bn, growing mid-single-digits %)
- Google Cloud – includes infrastructure, data, analytics, other services, generated by G-Suite productivity tools and Google Cloud Platform (\$10bn)
- Google Other – Google Play (sales of apps, content in Play Store), hardware (Nest, Pixelbooks, phones), and YouTube subscriptions (~\$20bn, growing low-to-mid teens %)
- “Other bets” – moonshot bets in areas like healthcare, self driving cars, broadband fiber, etc.
 - This segment draws the most criticism, as it generates \$600m in revenue but loses over \$5bn a year
 - However, possible that GOOG tries to use this segment to (1) dampen the earnings power of the overall business, for regulatory and anti-competitive reasons, (2) sexy-up the business, whereas it can change the perception of its business for other areas, such as Cloud, whereby enterprises view GOOG (and MSFT, IBM, CSCO, ORCL, AMZN) through a lens based on their legacy businesses

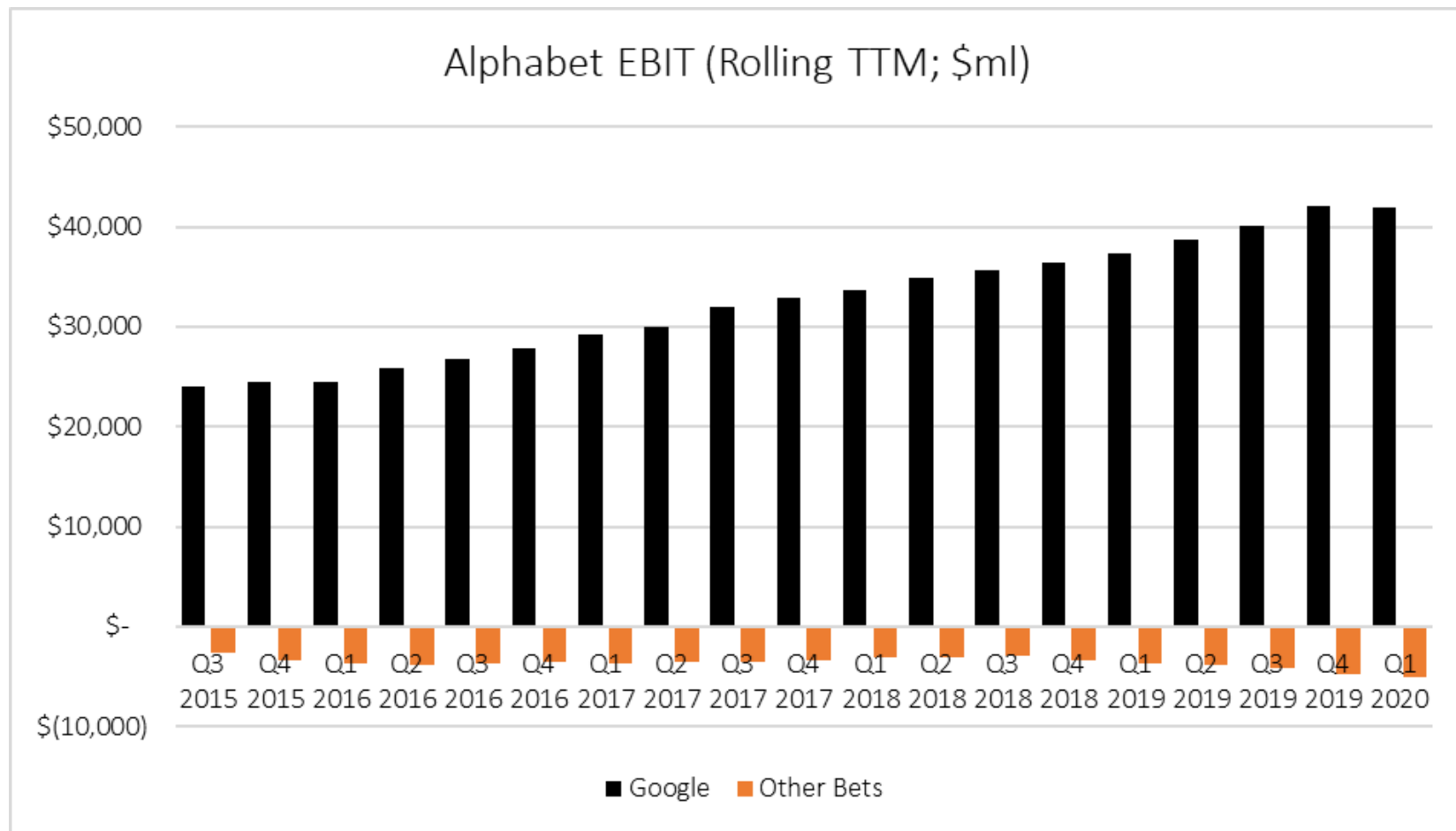


Alphabet Revenue Mix





Alphabet Operating Income Mix



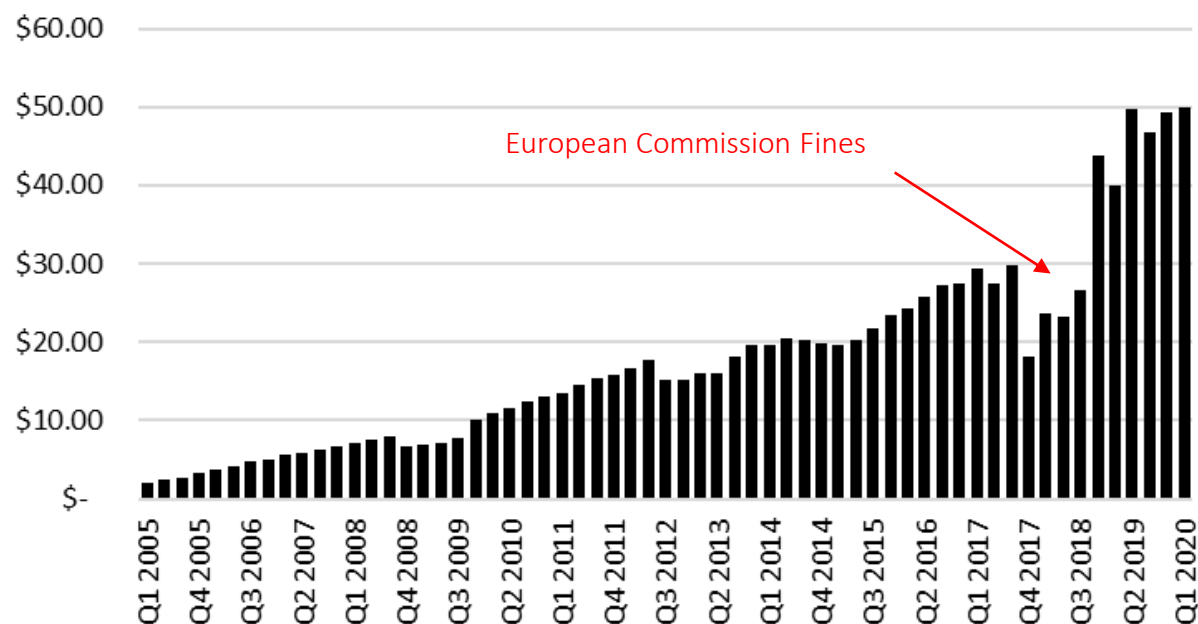
Core Google:
\$160bn in revenue
> \$40bn in EBIT

Other Bets:
\$600m in revenue
(\$5bn) in EBIT

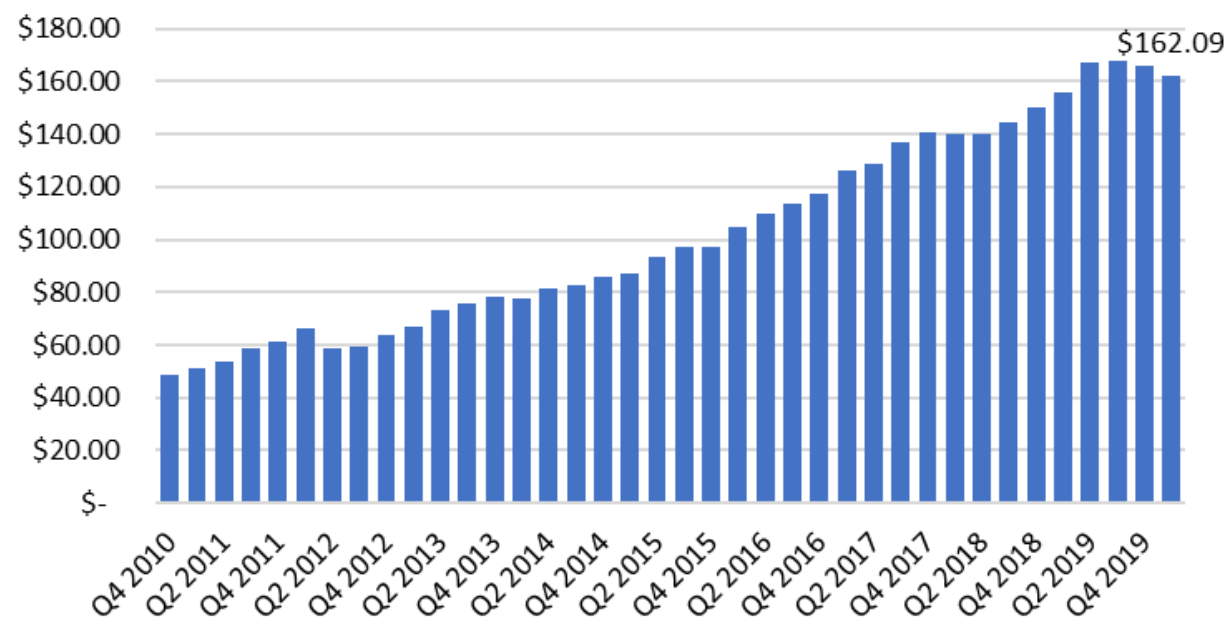


Alphabet Per-Share #'s

GOOG: Reported Diluted EPS (TTM)



GOOG: Net Cash, per Share

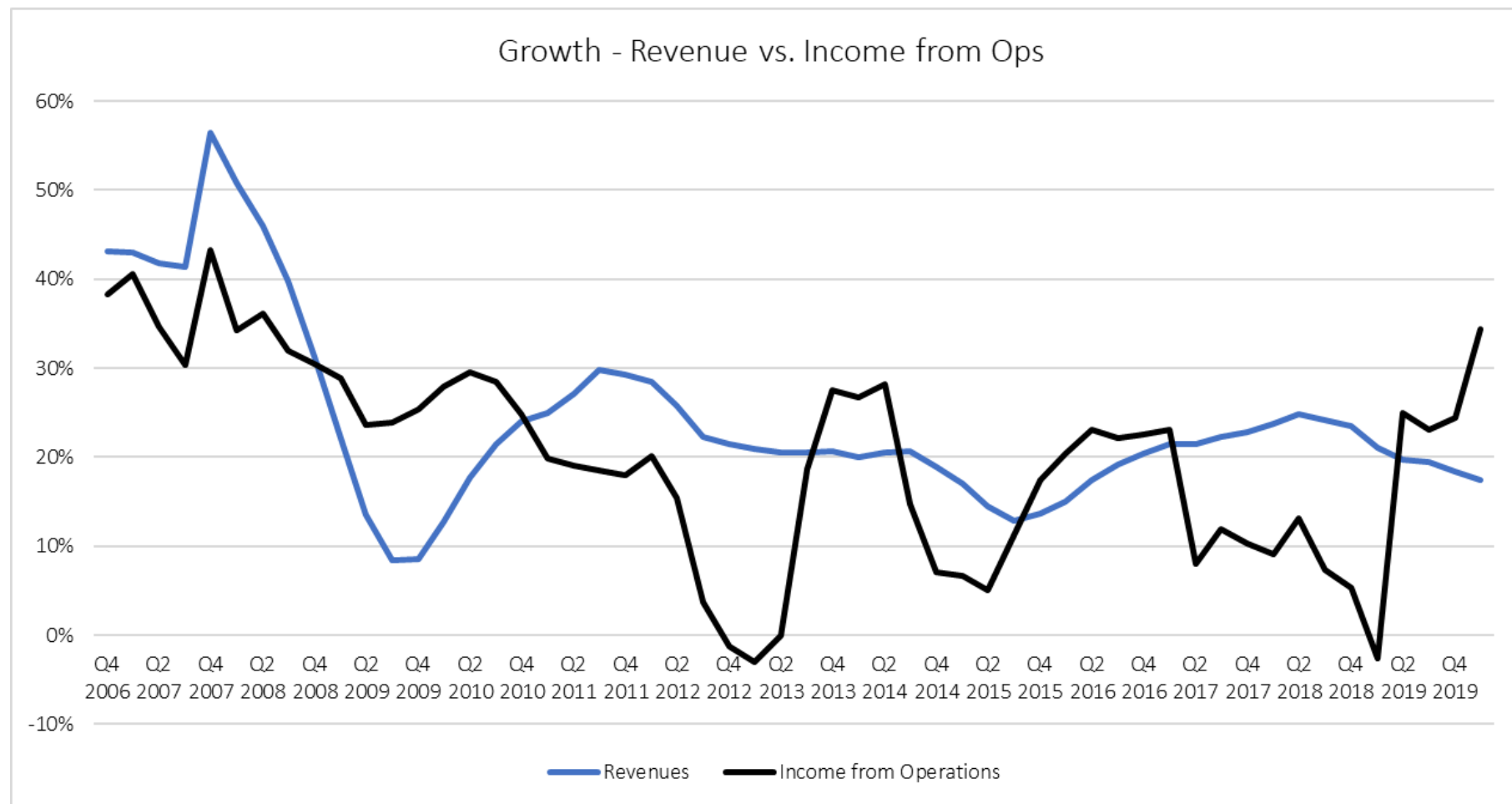




Alphabet Growth Rates

GOOG continues to grow revenues mid-high teens % y/y, driven by Google Search (high SD – mid-teens %), YouTube (>30%), Cloud, Hardware, and Google Play (20-30%+)

OpEx depends on a combination of SBC, investments in headcount, R&D, and the massive ramp in capex (=higher depreciation)



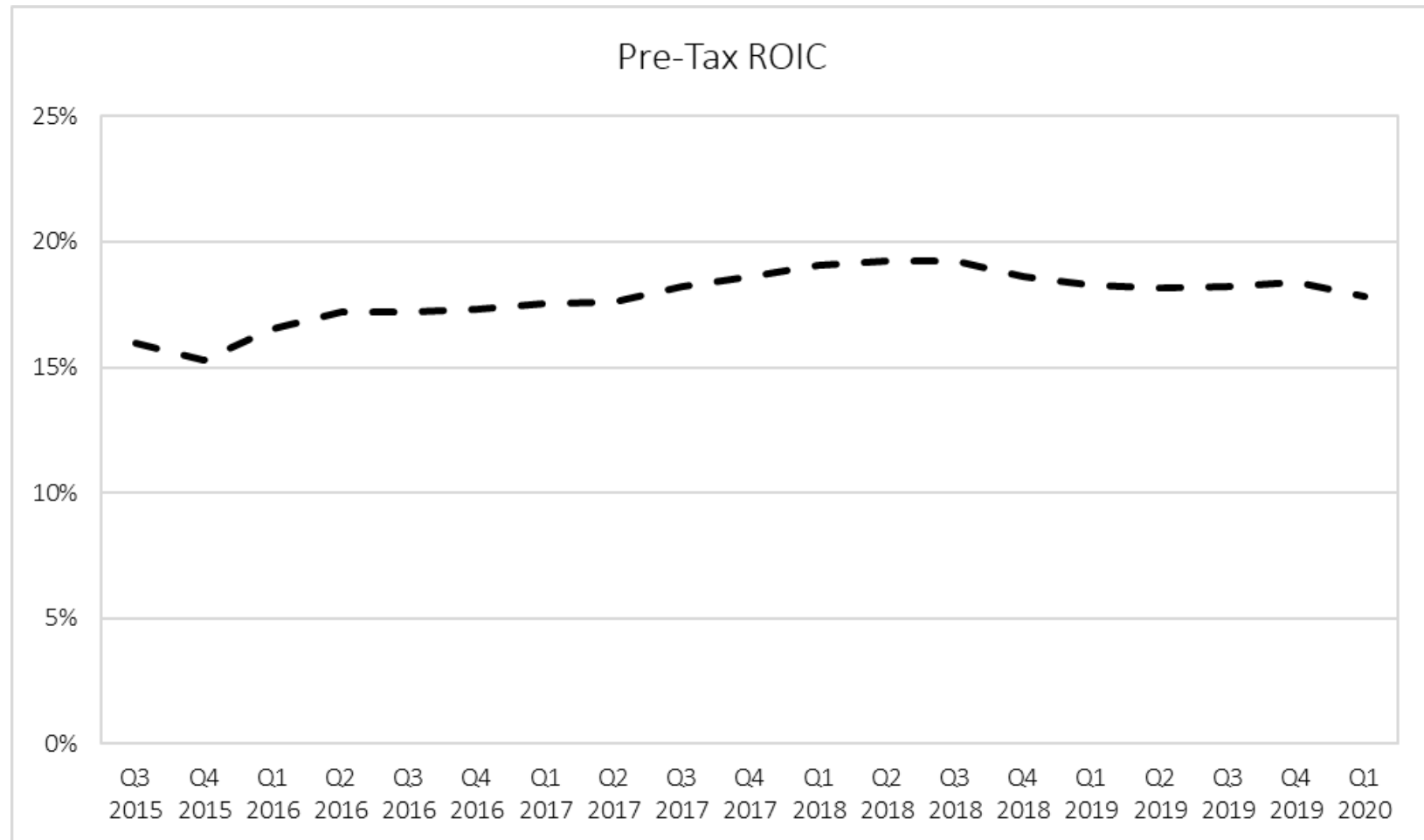


Alphabet ROIC

GOOG ROIC is *mid-high teens %* consistently over the last 5 years

While this might not look impressive, especially given the market position Google search has, and the grand slam acquisitions they've made (YouTube, Android, DoubleClick), this ROIC is heavily understated. *Why?*

- Of the ~\$207bn in invested capital, they have \$117bn in cash
- A lot of the investments are in major money losing, non-core operations currently like other bets (losing \$5bn EBIT) and Google Cloud ~ (-\$1bn EBIT)
- The “core” business ROIC is likely >100% as the investments are largely made via the P&L (AAPL TAC, overall TAC, YouTube content sharing, SBC for engineers, etc.)





GOOG Investment Thesis

- It's a levered play on global digitalization & Google's dominance in areas such as paid search and online video
 - Internet user growth globally
 - Smartphone access and penetration globally
 - Capabilities of online platforms – search, social, online video – to attract users for discovery, research, and purchase intentions – and those platforms having the ability to monetize those users in the form of advertising
 - Google search has a dominant position (ex-China) on a global scale with 90-95% market share of search, despite not being the sole default search browser on a global scale
 - With over 2.5 trillion searches per year, Alphabet uses this data, as well as GPS tracking, search history, websites visited, etc. to build up algorithms / AI to provide a better advertising proposition, one that is more easily measured, and viewed as very efficient by many CMOs.
 - In a sense, GOOG search is a play on global growth and advancements of countries towards a more digital economy, whereby they take a fraction of this pool of growth
- With 9 products having over 1 billion users, GOOG is highly engrained in people's daily lives: Android, Chrome, Gmail, Google Drive, Google Maps, Google Search, Google Play Store
- Google Search generates about \$100bn in revenues, with about 50% being in mobile +/-, <10% in tablet, 40% in desktop, and \$83bn post-TAC. At 30-40% margin post-TAC, EBIT for search alone is ~ \$25bn - \$30bn. Given the dominance, market share, and growth rates of mobile, at 20x EBIT = > \$500bn alone (and most investors, SS analysts would likely call this "conservative")
- YouTube is a \$15bn business, with est. ~50% of revenues going back to content (Morgan Stanley), and growing >30%. Further, the ARPU is 50% that of FB Blue, so monetization should continue to improve.
- Google loses about \$5bn in "other bets" (pre-tax) which has nothing to do with the core advertising business. Any valuation creation or financial prudence in this area would be highly accretive.



9 Products With > 1 Billion Users



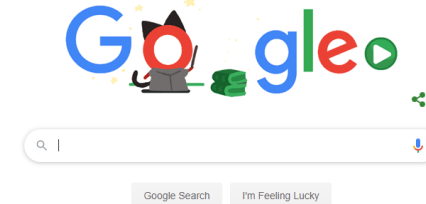
Google Photos



Google Play



Google Maps



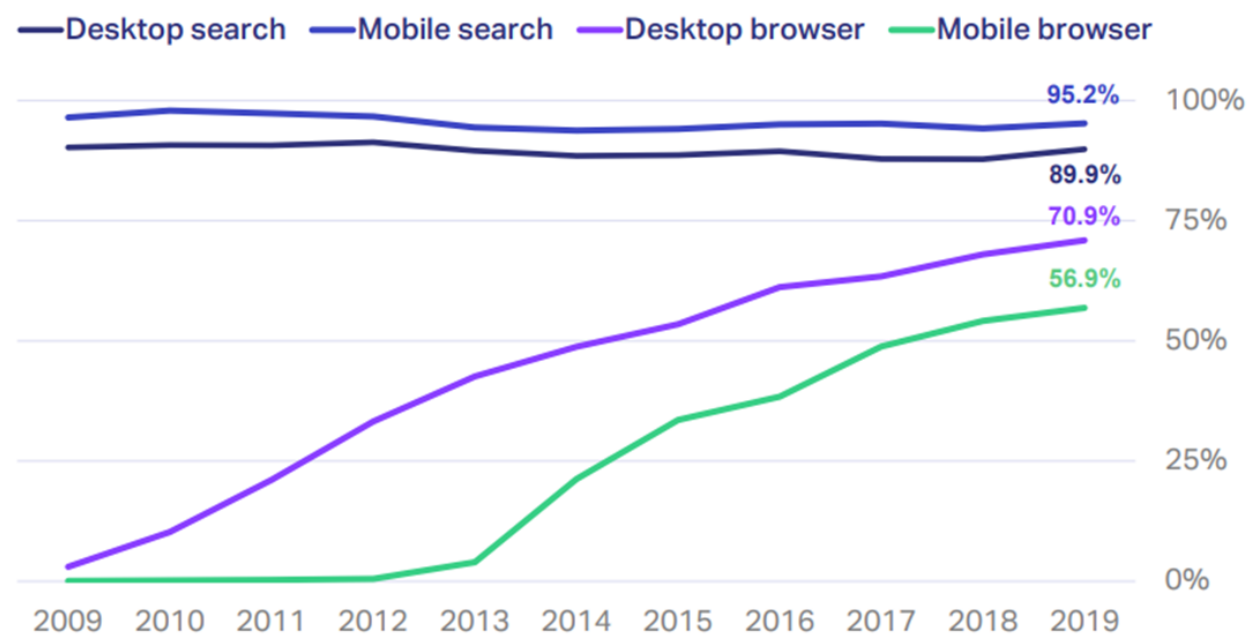


Segment: Google “Search”

- Unquestionably the cash cow of Alphabet’s business
- Over one billion people use GOOG search service each month
- GOOG dominates the search engine market, accounting for almost all mobile search (95%) and 90% of desktop searches, levels that have been consistent for more than a decade
- GOOG handles more than 75,000 searches per second across all devices, more than 2 trillion in an average year
- GOOG made \$134bn in advertising in 2019, with \$98bn from Google paid search (~75% market share in global paid search)
- Chrome’s share of browser market is much lower by comparison, especially on mobile devices
- GOOG-designed Android OS is on 3 out of 4 smartphones, Chrome is not the default browser on Samsung, Apple, and Huawei devices (48% market share combined)

Over one billion people use a Google service each month

Google, Global penetration by device, % share of measured web traffic



SOURCE: Statcounter

Other Segments



\$17bn in revenues
Growing 30%+
Fastest growing format of digital
advertising – online video
ARPU is ~50% that of FB Blue



Google Cloud

~ \$10bn in revenues
Growing 50% in Q1'2020
Massive capex spend in
this segment to catch up
to AWS / Azure



Google Play

~ \$15-20bn in revenues
Growing >30%
Pre-installed on Android OS
– smartphones
Installed base >2.5bn



Google Maps

Massive opportunity
long-term to
monetize this app,
which has > 1bn
users



Other Segments

- GOOG Search + YouTube are the largest components for GOOG's investment thesis, due to the combination of mix of revenues, growth rates, and FCF generated
- Many investors, analysts have made the case that those two businesses are worth \$600bn - \$800bn combined (current EV = \$850bn)
- Given the competitive nature of Google Cloud (Gsuite, Google Cloud Platform), and the massive capex spend associated, many investors don't think too much into how GCP play's into the GOOG thesis
- Waymo – losing money (how much?) and truly a moonshot idea, should investors give value to something that is losing a lot of money, and may not make money for....the foreseeable future?
- Verily – GOOG life science research, a leader in leveraging tech to prevent and treat chronic diseases, cancer
- Google Fiber – halted rollouts, but they still have assets in the ground and some subs
- X – experimental R&D unit (includes Project Loon)
- DeepMind, Google Ventures, CapitalG - how much value is here?



New Corporate Structure

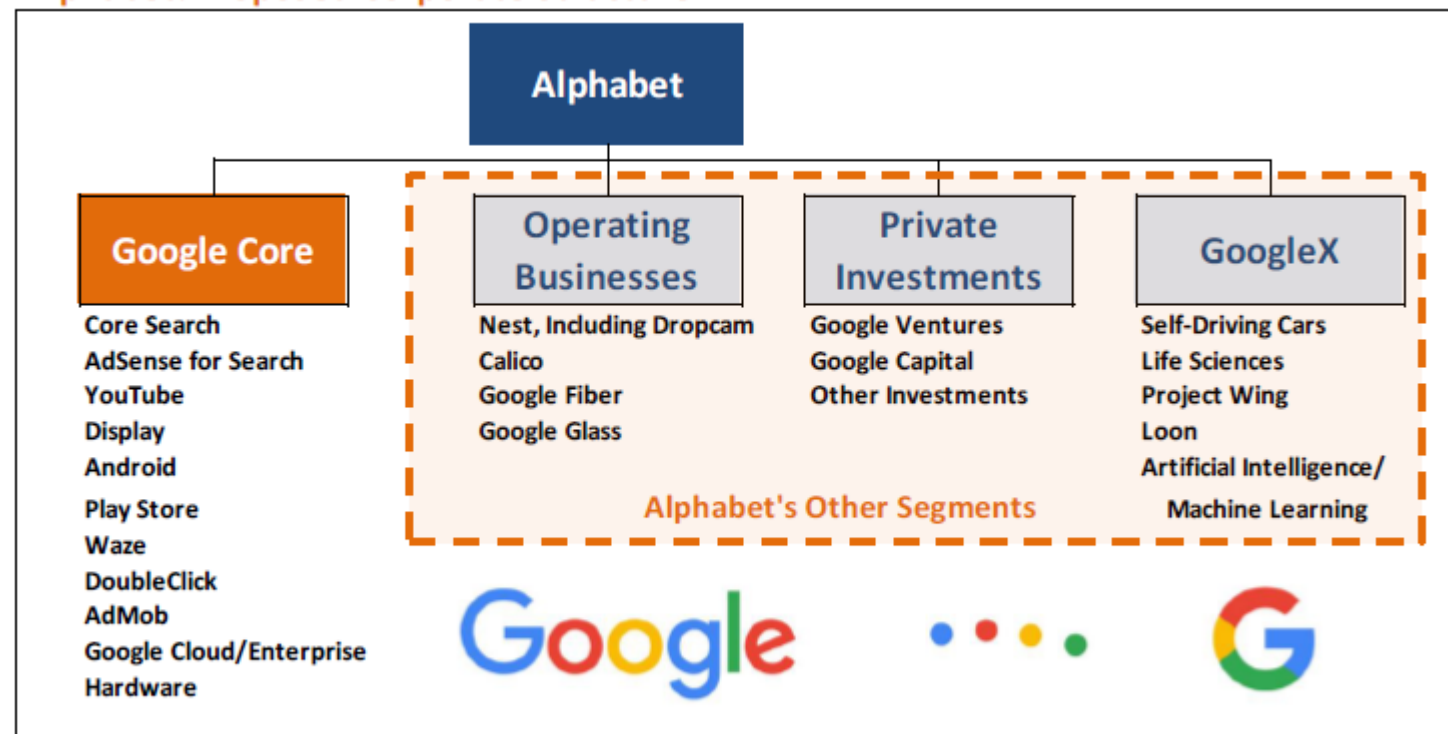
- In August 2015, Google announced a new operating structure
- Larry Page became the CEO of the new company, “Alphabet” with Sergey Brin as the President
- Sundar Pichai became the CEO of Google, taking over from Larry Page
- Meant to separate the “core” business of search/advertising/Android, with the other businesses that are non-core (Google Fiber, X, Calico, etc.)
- Investors cheered the change, comparing it to Warren Buffett’s “Berkshire Hathaway”. Larry Page has said he looked to Berkshire as a model for running a large, complex company
- New website became “*abc.xyz*”
- I think the new corporate structure was meant to be send the message about running the businesses separately and more independently, where each subsidiary has its own metrics and targets, comps, and can also compensate more specifically. It also meant for (slightly) more disclosure to investors.
 - More transparency for high level managers



New Corporate Structure (2015+)

- Two business “arms”
 - **Google core** – search, ads, maps, YouTube, and Android
 - **Other** – Calico, Nest, Fiber, Google Ventures, Google Capital, X, among others
- In addition to running it more decentralized, it gives Ruth Porat, the new CFO, a better handle on how to gauge ROI on the investments and products
- Larry Page also said they are aware of the image problem, and the change would make things “cleaner and more accountable”

Alphabet: Proposed Corporate Structure



Source: Company reports; STRH



Out With The Old, In With The New....

- I'm not going to go deep into Larry Page, Sergey Brin, and Eric Schmidt
 - If you're interested, read "In The Plex" by Steven Levy
 - Or – the Playboy article prior to the IPO that got them in trouble (<https://kottke.org/plus/misc/google-playboy.html>)
- The new corporate structure seems to be the beginning of a shift inside GOOG and how they are working on being more financial prudent with the business
- Moonshots, "other bets", YouTube all help GOOG attract talent in a highly sought after and competitive space, but it is welcoming from an investor standpoint to not squander the core-GOOG search FCF just because you can, whenever you want
- CFO Ruth Porat (from Morgan Stanley) is viewed to sort of be "the adult in the room" when it comes to managing GOOG's FCF, but she still is overshadowed by Larry Page and Sergey Brin, the founders, who own more than 50% of voting rights
- Eric Schmidt – who was CEO 2001 - 2011, then transitioned to a technical advisor – exited the role in February 2020. The departure comes 3 years after Schmidt said he was stepping down as Executive Chairman and would no longer serve an operational role.
- Page and Brin transitioned the operations role / CEO to Sundar Pichai in 2019. He was running the core search business prior to the move, since 2015.



Ruth Porat (CFO)

- Was previously CFO of Morgan Stanley, joined Google as CFO March 2015
- Ruth joined MS in 1987
 - Was Vice Chairman of Investment Banking
 - Global Head of Financial Institutions Group
 - Co-Head of Technology Investment Banking
 - Helped with financing rounds, including EBAY, AMZN, BKNG, VRSN, Netscape, BX, GE, and NYSE
- *“I look forward to learning from Ruth as we continue to innovate in our core—from search and ads, to Android, Chrome and YouTube—as well as invest in a thoughtful, disciplined way in our next generation of big bets.”* – Larry Page
- Key here is she came in to instill more discipline around spending and meeting ROI targets, driven by the decentralization of the business in August 2015. With the new corporate structure, each business and its managers would have targets and goals. If the business doesn’t have a clear path, the project could get cut.
 - Paused Google Fiber, the once ambitious plan for fiber internet across the U.S., which was launched in 2010
 - Said Google Fiber hadn’t achieved its “10x moment”
 - Alphabet’s “other bets” capex spend went from \$1.4bn in 2015 to just \$250m TTM (2019)
- This changed the culture around Google as the culture became accustomed to spending frivolously on moonshots even without a clear path to profitability



M&A History

Android (2005)



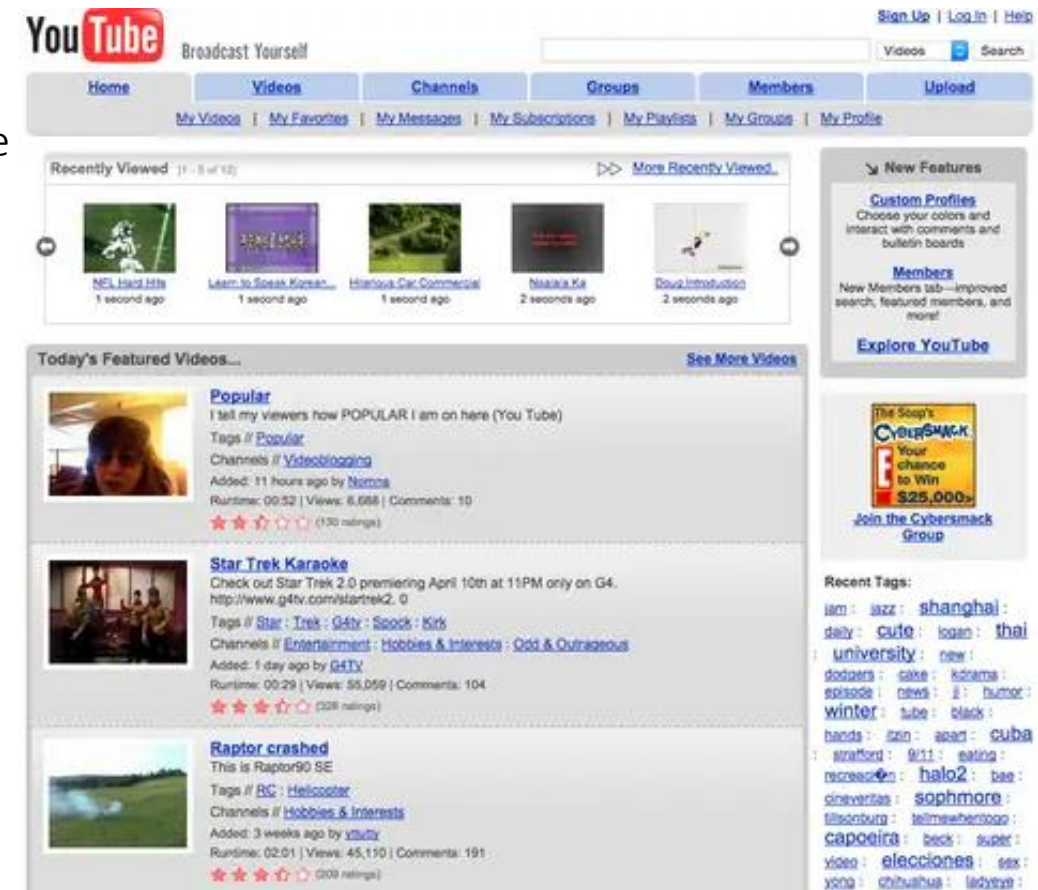
- Google called it their “best deal ever”
- Estimated purchased price of **\$50m** (rumored price; total 2005 acquisitions were \$130m)
- Android is the open-source operating system, began in 1H 2003 originally to be an OS for digital cameras, then switched it for phones
- Google does not charge for the operating system itself, but automatically has Google apps and search as the default, and mobile ads are displayed on Android phones
- Google engineers spent 3 years developing the OS for mobile devices, launched the HTC Dream / T-Mobile G1 in 2008
- Today, Android is the #1 operating system for mobile devices globally, with 72% (AAPL has 27%)



YouTube (2006)



- Acquired in 2006 for **\$1.65bn**, in an all stock deal, which was about \$1bn *more* than GOOG wanted to pay
- YouTube was an unprofitable startup, and was the most expensive acquisition by GOOG at that point
- They shared a common bond – Sequoia Capital, who was an early investor in GOOG, owned 30% in YouTube
- At the time, YouTube had 19.1m monthly visitors – now, they have over 2bn
- Had 65 employees, HQ in San Bruno, CA, was an 18 month startup at the time
- CEOs Chad Hurley (left GOOG in 2010) and Steven Chen (with Google Ventures)
- YouTube did \$15.1bn in advertising revenues in 2019
- Estimates of financials prior to GOOG disclosing Feb 2020 have been *higher* than *actual* financials, but ballpark estimates of YouTube valuation around \$150bn (or about \$200/share)





DoubleClick (2008)

- Purchased in 2008 for **\$3.1bn**
- DoubleClick: ad service and management company that web publishers use to display and target visual and rich media advertising
 - Uses a cookie that reports back every time a user visits a site using the system
 - GOOG can merge the database with its knowledge of user's search histories, and URLs visits
 - Allows advertisers to ensure the advertisements are posted on relevant websites, and can report on the performance of those ("ad serving")
- MSFT and YHOO hoped regulators in US and Europe would block or attach conditions to the purchase, to slow GOOG's growing lead in online advertising and search
- Privacy groups opposed the deal as it would give GOOG too much information on individuals search history



AdMob (2009) (now: “Google Ads”)

- Purchased for **\$750m**; Focuses on innovative solutions for advertising in mobile applications (i.e. mobile apps only)
 - Creates ad space in your app
 - Can either show Google or 3rd party ads on your app, or display your own
 - Helps mobile developers earn money by posting
- GOOG saw tremendous growth in mobile search volume, growing more than 5x from 2008 to 2010
- Increasing people weren't just typing search queries into their mobile devices, they spoke them, took photos of them, or translate from another language
- AdMob was one of the first companies to serve inside mobile applications on Android and iPhone platforms
 - Interactive video ad units
 - Expandable rich media ads
- It was becoming evident that people access information through mobile websites (accessed through a browser) and mobile apps (available through Apple's App Store, or Android Marketplace)
- FTC investigated the deal, ruled it unlikely to harm competition in mobile advertising networks
- Competed against Apple's iAd (now discontinued)
 - While advertising on Android is often synonymous with AdMob, both AdMob and iAd can be done on iPhones
 - The fill rate (i.e. how often an ad successfully appears) is ~ 30% for iAd, and around 85% for AdMob

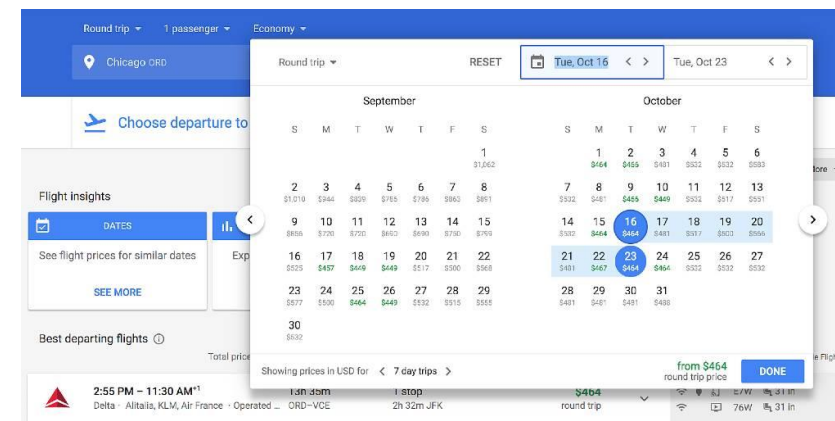




ITA (2010) (*Now: Google Flights*)

- Acquired July 2010 – ITA Software is a Cambridge, Massachusetts flight information company
- Software was known as QPX (ITA)
- Paid \$700m
- Meant to help GOOG create a new, easier way for users to find flight information, which should encourage them to make their flight purchases online
- Should make it easier to benefit passengers, airlines, and OTAs by making it easier for users to compare and shop for flights
- ITA powered the search for Orbitz, Hotwire, Kayak, and Cheap Tickets at the time

Website	Airfare Search Powered By
Expedia	Best Fare Search (Expedia)
Priceline	e-Pricing (Travelport)
Travelocity	ATSE (Sabre)
Orbitz	QPX (ITA)
Yahoo! Travel (powered by Travelocity)	ATSE (Sabre)
Hotwire	QPX (ITA)
CheapOair	FarePortal
Kayak	QPX (ITA) and Meta Pricer (Amadeus)
CheapTickets	QPX (ITA)





Motorola Mobility (2011)

- Purchased in 2011 for **\$12.5bn** (\$40/share, as MM was a public co.) in cash
- Motorola Mobility was an Android partner, meant to enable Google to supercharge the Android ecosystem
- Larry Page said the purchase was due to Motorola being a “*market leader in the home devices and video solutions business*”, and, “*enable us to better protect Android from anti-competitive threats from Microsoft, Apple and other companies*” (hinting at the patent portfolio)
 - They held ~14,600 grated patents, and 6,700 applications pending at the time.
- Prior to the acquisition, Motorola Mobility was the devices division of Motorola until 2011. They went all in on Android, launching the “Droid” in Nov. 2009, then “Droid X” and “Droid 2” in 2010
- Many investors criticize this deal, but its important to know:
 - Google sold Motorola Home to Arris for \$2.35bn
 - Motorola Mobility had \$3bn in cash
 - Sold Motorola Mobility to Lenovo for \$2.91bn
 - Motorola Mobility had \$2.4bn in DTA (deferred tax assets)
- Net purchase for the (what ended up being) ~ 17k patent was ~ \$1.6bn
- Furthermore, selling Motorola Mobility to Lenovo improved GOOG’s relationship with Samsung



Waze (2013)



- A social mapping location data startup
- Google purchased it in 2013 for **\$1.1bn**
- Meant to complement Google Maps to enhance search capabilities and join them in their ongoing efforts to build the “best map of the world”
- At the time Waze had 50m users, and is far more user engaging than Google Maps
 - Carpooling
 - People share about police traps, stopped cars, etc.
- There was interest from Apple and Facebook as well



Nest (2014)



- Purchased in 2014 for **\$3.2bn** in cash
- GOOG spun it out with 2015 restructuring, as a separate division under “Other Bets”
- CEO Tony Fadell left Nest mid-2016 amid questions about sales goals and workplace culture; Fadell is known as the “godfather of the iPod”, in a way a comp to Apple’s Jony Ive.
- GOOG reportedly tried to sell Nest in 2016 but abandoned the effort
- Nest was pitched as the hardware built on artificial intelligence algorithms, that work pair with GOOG’s other AI efforts





Fitbit (2019)

- Acquired in 2019 for \$7.35/share (valuing company for **\$2.1bn**, all-cash)
- Apparently, FB competed against GOOG for FitBit, as GOOG originally offered \$4.59/share.
- FitBit founded in 2007, currently has around 28m active users around the world
- “the company never sells personal information, and Fitbit health and wellness data will not be used for Google ads”
- Google has struggled with hardware and wearables category
 - Google Glass smart eyewear
 - Purchased a large chunk of IP from Fossil watchmaker in 2019 for \$40m
- Fitbit has struggled in recent years with the Apple watch and other smartwatches entering the fitness watch market
- Speculation around a combination of Google’s tech + Fossil’s IP + Fitbit = a Pixel watch at some point, built around more data for healthcare and fitness





Trends



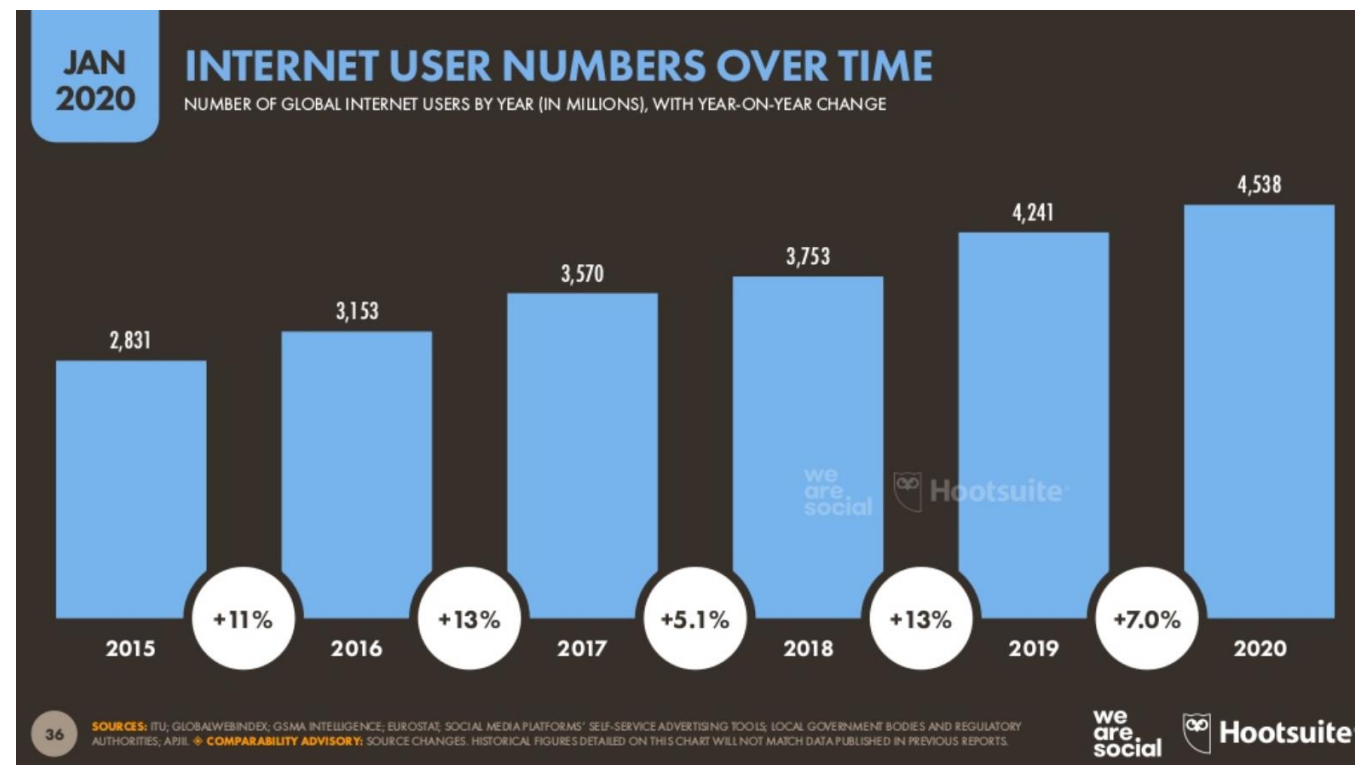
Broad Trends Impacting GOOG Business

- Global internet user growth, but signs of maturing
- Digitalization of global economies
- Capabilities of digital advertising vs. traditional
- Growth of smartphone penetration and usage
- Online video growth, coinciding with more ad dollars invested in this channel
- **Will discuss some of these in this section, many others in the advertising section in more depth**



Global Internet User Growth

- As more people have access to the internet – either on desktop or mobile/smartphone – the more opportunity for GOOG to monetize the need for people to research and discover things
- Furthermore, the more people have access to the internet, the more opportunities for businesses to capitalize on this and try to expand their business through advertising online
- Most of the internet user growth is in 3rd world countries, as large domestic companies are largely saturated in terms of online penetration



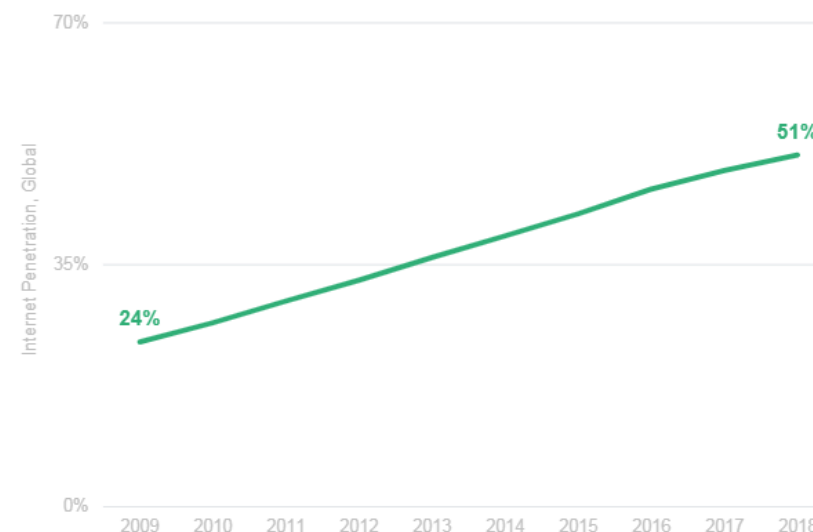


Global Internet User Growth

- Coinciding with global internet user growth is “*how much further can this grow*”? – i.e. what is the penetration of internet users globally, and what is the potential
- As of the E2018, there was a 51% penetration of internet globally, up from 24% in 2009. By YE = **59%** (Hootsuite)
 - Asia Pacific = 48% penetrated
 - Europe = 78%
 - Africa & ME = 32%
 - LatAm = 62%
 - North America = 89%
- There is clearly significant room to run; however, there needs to be the infrastructure and technological advancements in many countries to support the internet

Global Internet Users =
3.8B >50% of Population

Internet Penetration, 2018



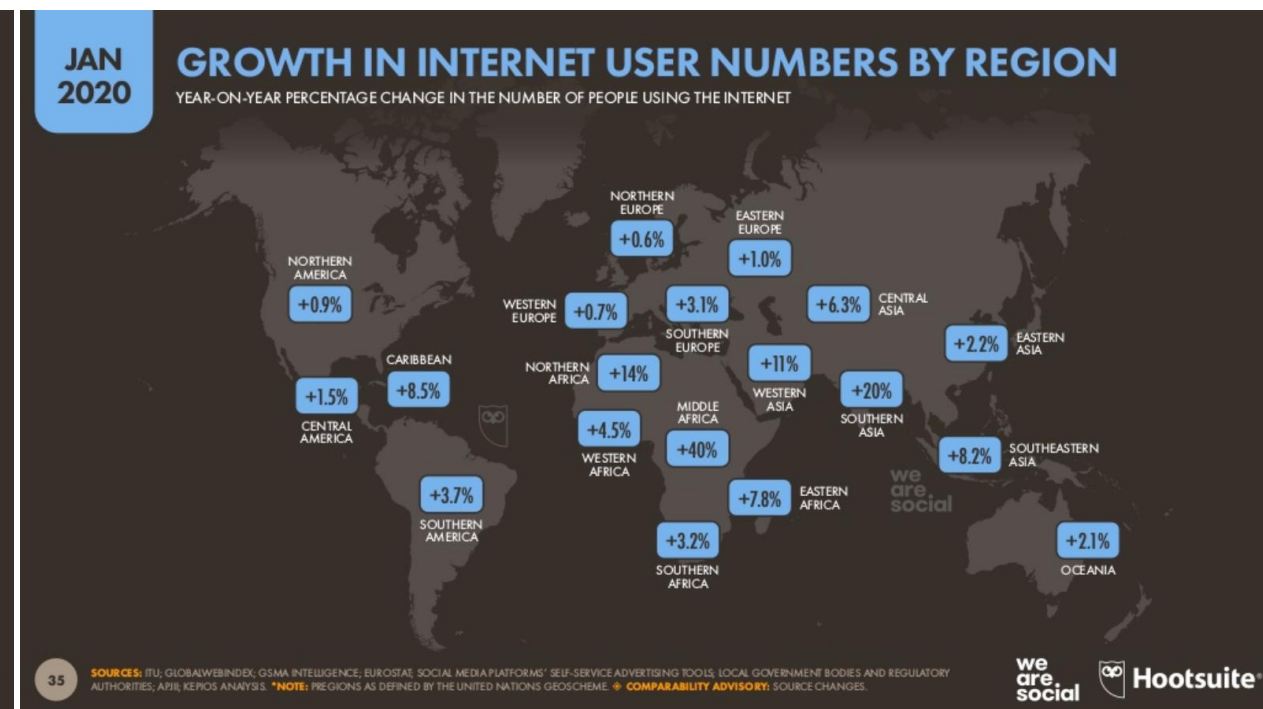
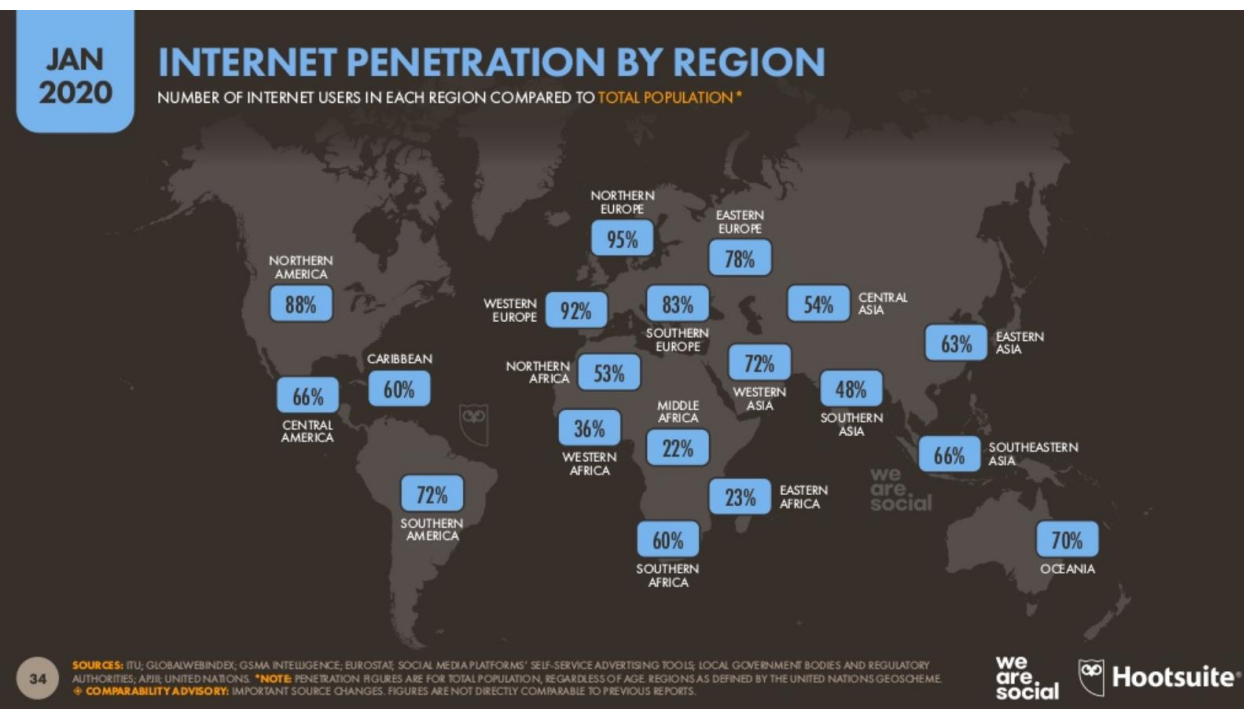
BOND
Internet Trends
2019

Internet user data is as of mid-year. Source: United Nations / International Telecommunications Union, USA Census Bureau, Pew Research (USA), China Internet Network Information Center (China), Islamic Republic News Agency / InternetWorldStats / Bond estimates (Iran), Bond estimates based on IAMA data (India), & APJII (Indonesia).

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Global Internet Penetration & User Growth

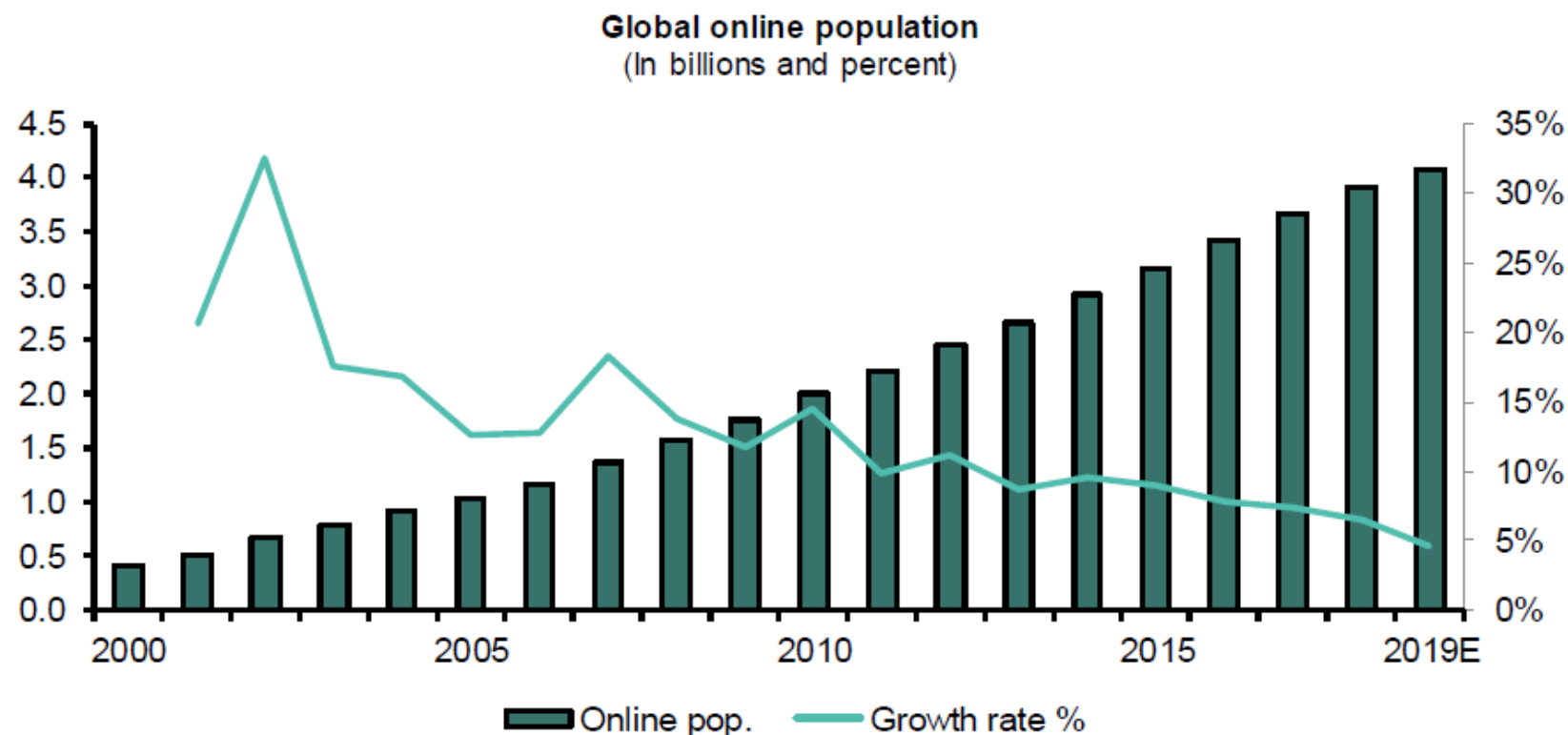




A Maturing Internet

- Most of the world is now online, thus despite there still being internet user growth, it is slowing down
- As of 2019, there were 4.1bn people online = ~53% of population
- There is still growth left, however there is at least 20% of the world that is inaccessible, including a portion of the population under-age (~25%)
- Considering only addressable population, the effective online penetration rate is 65-70% (Bernstein)
 - 90%+ in North America, for example
 - ~80% in Europe
 - ~40% in Africa, Middle East

EXHIBIT 10: **There are expected to be ~4B people using the Internet by 2019, growing at ~5% Y/Y**



Source: IDC, ITU, Euromonitor, Bernstein estimates and analysis

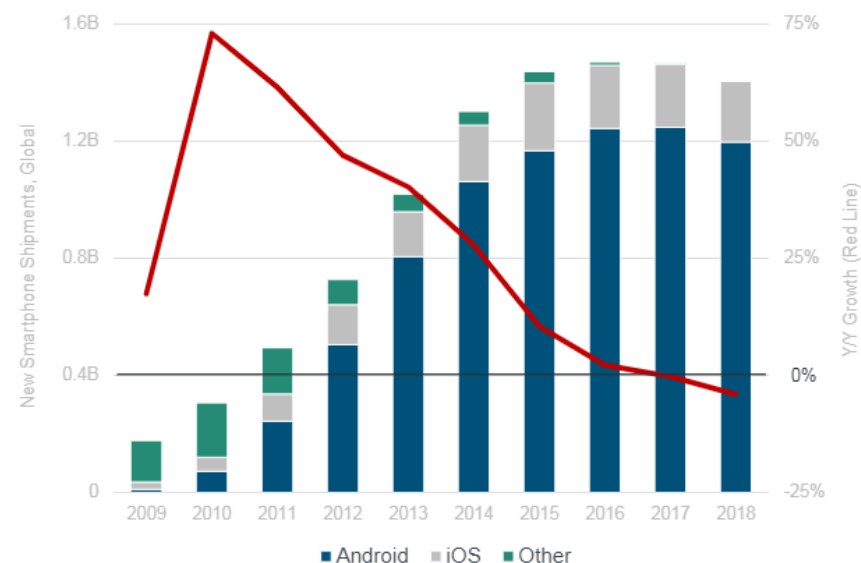


Smartphone Shipments / Penetration

- The capabilities of mobile vs. desktop, as well as the fact that 80% of mobile usage is on apps, the more capabilities that GOOG and other digital advertisers have
- Facebook, Instagram, Snapchat, Twitter, TikTok are largely or completely app-based, which needs to be installed on a smart device like a tablet or smartphone
- As of 2018, the vast majority of smartphone unit shipments were on Android (GOOG), and was a duopoly between Apple (iOS) and Android (see chart right)

Global New Smartphone Unit Shipments = Declining -4% vs. 0% Y/Y

New Smartphone Unit Shipments vs. Y/Y Growth

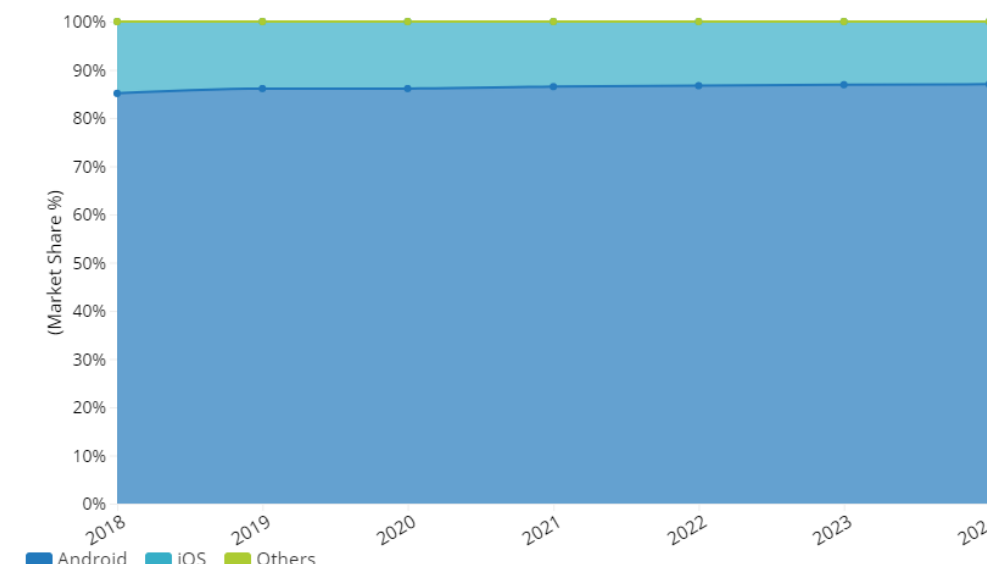




Android OS Penetration

- Worldwide smartphone market is expected to decline in 2020, especially with COVID-19
- International Data Corporation (IDC) expects shipments to decline 2.3% in 2020 to 1.339 billion, down from 1.372 billion in 2019
- IDC believes growth will return in 2021 due to launch of new devices, 5G plans picking up, and pent up demand from COVID
- By 2024, IDC expects overall smartphone market to reach 1.511 billion units
- The more smartphones that are Android OS (GOOG), the lower the TAC associated with having GOOG products installed, as well as the higher installed base of GOOG products being used
- IDC estimated Android had an **86.1% market share** in 2019, growing slightly to 87% by 2024

Worldwide Smartphone Shipment OS Market Share Forecast

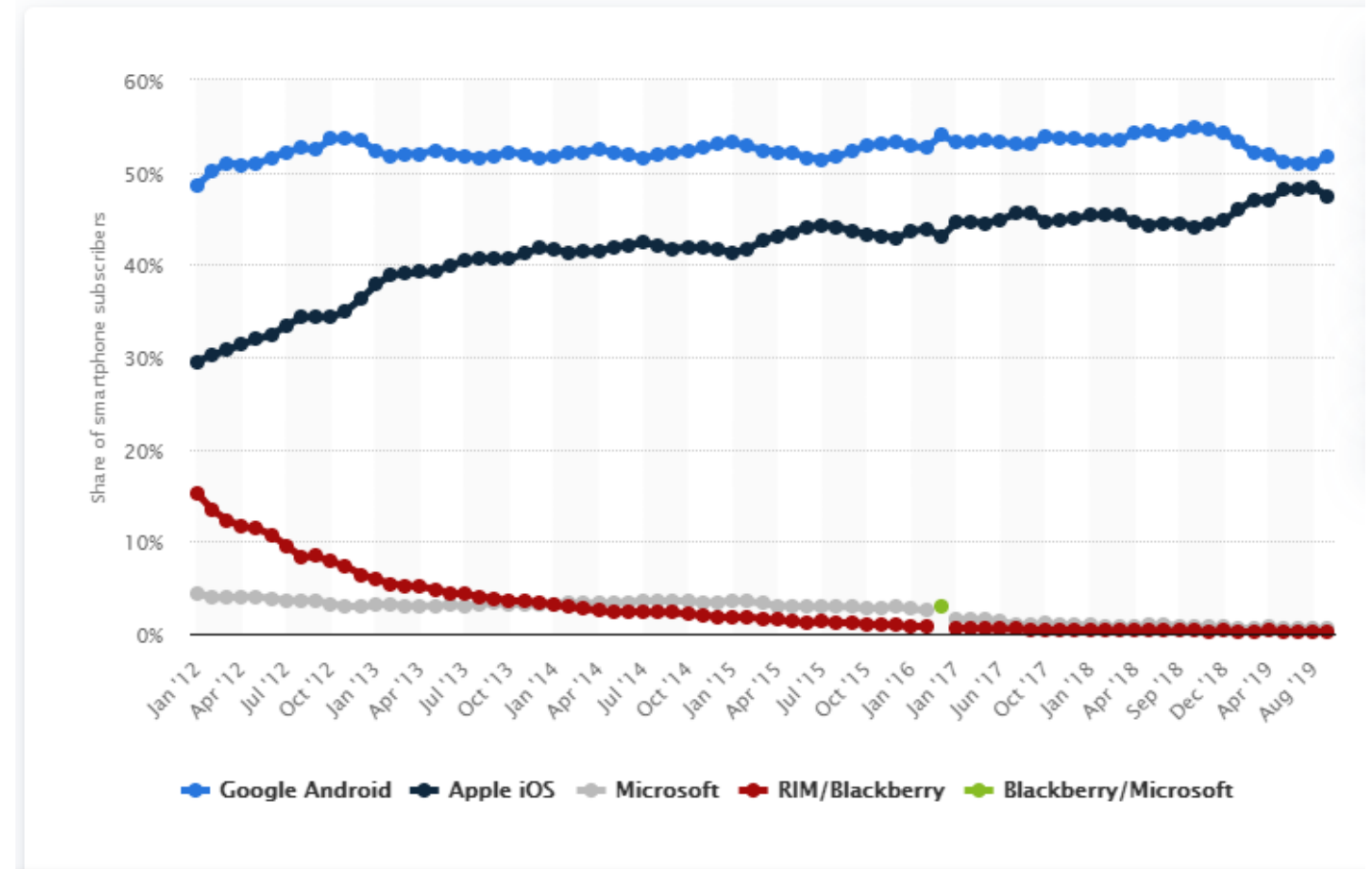


Year	2018	2019	2020	2021	2022	2023	2024
Android	85.1%	86.1%	86.1%	86.5%	86.7%	86.9%	87.0%
iOS	14.9%	13.9%	13.9%	13.5%	13.3%	13.1%	13.0%
Others	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Android OS Penetration – U.S.

- Despite having an 86% global market share of smartphone device OS, the U.S. market is more bifurcated
- Over the last 8 years, the OS market share went from a 4 player markets to 2
- Android's OS has been relatively stable since 2012, around 50% (other sources have low 40%, depends on the device as well)
- The decline in Microsoft and RIM / Blackberry was at the benefit of AAPL, where the iPhone dominated the other operating systems due to the strength of the iPhone in the U.S.



© Statista 2019



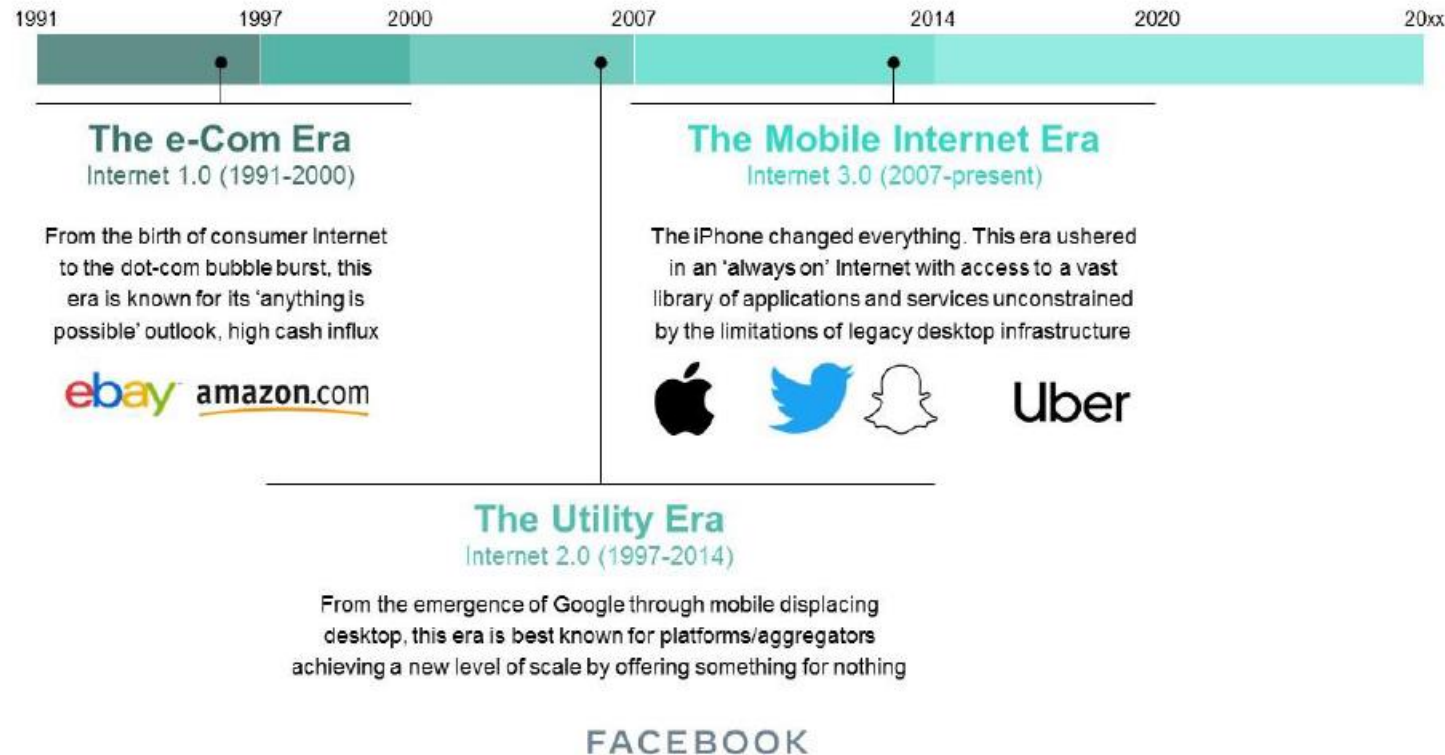
Sector Views

- The internet giants – FB, AMZN, GOOG, MSFT – continue to take advantage of economies of scale, economies of scope, and attract more user attention, ad spend, and mindshare across platforms
 - Alphabet now has 9 products with over 1bn users with Google Photos crossing the line in 2019, and a ~couple over 2bn – Android, YouTube
 - Facebook has 5 products over 1bn users – Facebook, Messenger, Instagram, WhatsApp, and Audience Network
- Optionality matters
 - GOOG has multiple flexes – including Maps, Images, G-Suite
 - AMZN's growth in search ad revenue on the back of its online retail strength
 - FB's ability to monetize Instagram continues, eventually WhatsApp
- The top companies, with the best market shares, forward-looking, and capable management continues to outperform the smaller, less advantaged and scaled players

Sector Views



EXHIBIT 13: The Internet evolution can be mapped across three over-lapping eras, with each era expanding upon scale and reducing points of friction



Source: Bernstein analysis

While the internet began in the early 1990s, the evolution and usage has changed quite a bit.

There is constant evolution and potential for disruption, as new motivations and capabilities arise.

Largely motivated by online retail, the internet from a consumer standpoint is now, more than ever, considered “always on” and highly integrated into our daily decisions, from grocery shopping, ride sharing, social, and so on.



Scale = Flexibility

- The larger “tech” names have so much scale and scope, they are and have been capable of crossing over into other areas for additional revenue sources
- AMZN:
 - Large online retail presence
 - Now, \$10bn run rate+ advertising business
 - Was able to enter into a digital advertising space heavily dominated by FB / GOOG, who was gaining market share as well (70-75% +)
 - They did this by approaching brands to product their product using the data they had on consumers spending habits vs. FB/GOOG that wasn't as similar
 - AMZN realized that ~50% of product searches begin on AMZN (largely through the app), so they have a closed loop platform to promote
- AMZN / GOOG / MSFT – ability to utilize massive amounts of existing data / AI, and convert to enterprise business solutions and analytics via cloud platforms
- AMZN / GOOG / MSFT / AAPL – using product stickiness, brand awareness to push sales (either hardware – phones, smart speakers) or ancillary services (Maps, Photos, Google Flights, Restaurants, etc.)
- Essentially all of the large players are battling for share of the wallet – AAPL, GOOG, FB, AMZN



Scale = New Opportunities for “Big Tech”

- As I mentioned, and illustrated by Bernstein analysts, the major tech companies – AMZN, GOOG, FB, AAPL, MSFT – are crossing over hardware, software, digital media, retail, advertising and other pools
- The more connected they are with consumers, the more valuable they become, the more “data” they have (yes, an on-going regulatory risk of “how much is too much”) to develop and crossover into other areas, generate additional pools of revenue
- Unfortunately, this is how the strong get even stronger.
- This is likely to accelerate and get amplified with a recession and COVID-19, as the smaller players with less cash generation, won’t be able to invest as much versus the larger players, who can push down the gas more.

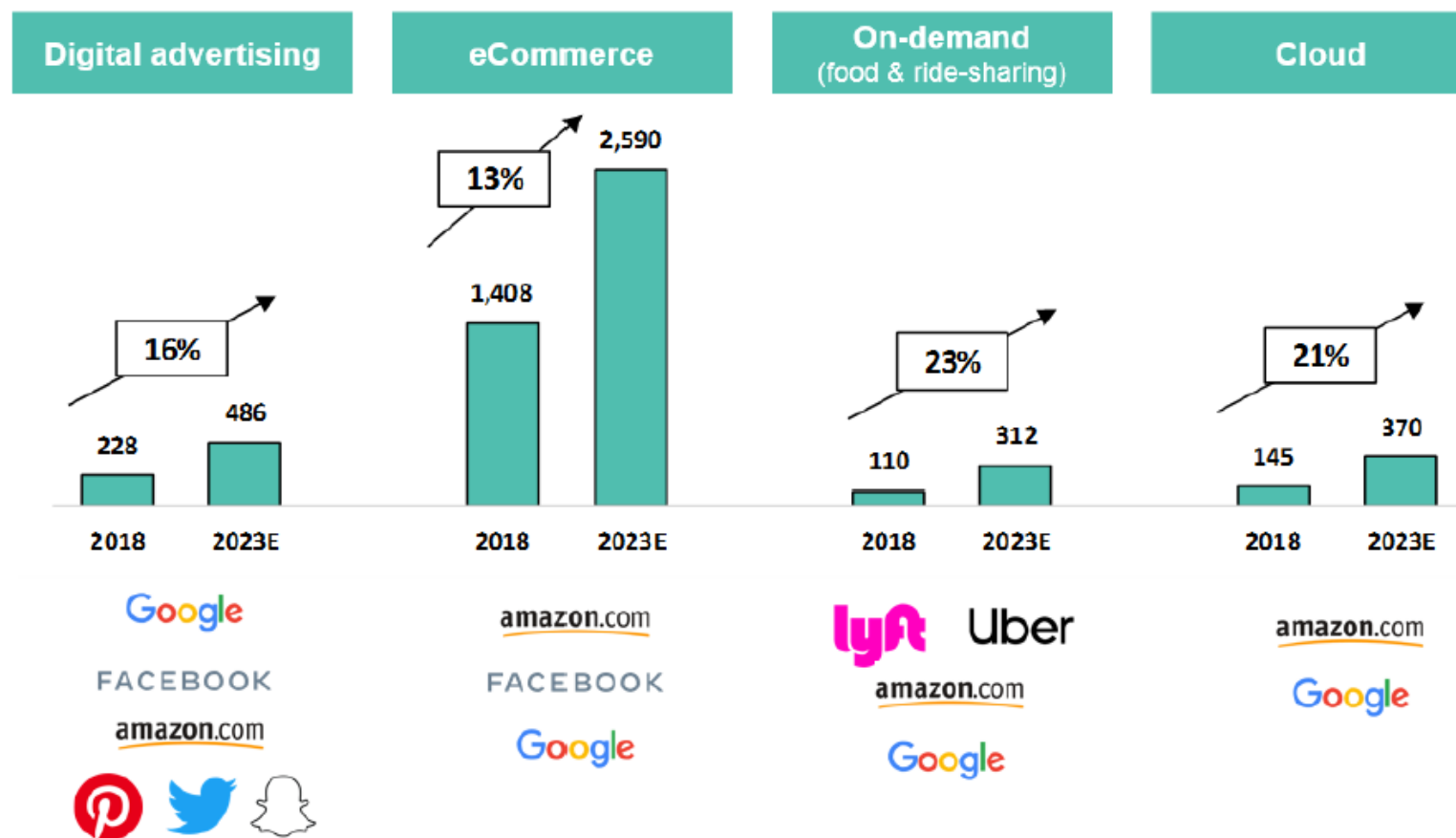
			Amazon	Google	Facebook	Apple	Microsoft	Rank
Hardware	Connected Home	Smart speakers	Echo	Home		HomePod		1
		Home security	Ring	Nest Cam				2
		TV Set Top Box	Fire TV	Chromecast	PortalTV	AppleTV	XBox	3
		Wi-Fi	Eero	Nest Wi-Fi				4
		Home hub	EchoShow	NestHub	Portal			N/A
	Mobility	Smartphone		Pixel		iPhone		
		Tablet	Fire Tablet	Pixel Slate		iPad	Surface	
		Laptop		Pixel Book		Macbook	SurfacePro	
		Gaming console		Stadia			XBox	
		AR/VR			Oculus		Hololens	
		Hearables	Echobuds	Pixel Buds		Airpod/Beats	Surface	
		Wearables		FitBit/Fossil		iWatch		
		Navigation		Maps/Waze		Maps		
	Utility	Messaging		Messages	Whatsapp/ Messenger	iMessage	Teams	
		Video conferencing	Chime	Hangouts		FaceTime	Skype	
		Social network		Youtube	FB/Instagram		LinkedIn	
		Web browser		Chrome		Safari	Explorer	
		OS	FireOS	Android		iOS	Windows	
		Voice	Alexa	Voice		Siri	Cortana	
		Search	Amazon.com	Google	Social	Appstore	Bing	
	Enterprise	Productivity		G Suite	Workplace	iWork	Office	
		Storage	Drive/S3	Drive/Photos		iCloud	OneDrive	
		BI tools	QuickSight	Looker			Power BI	
		Cloud	AWS	GCP			Azure	
Digital media	Content	TV streaming service	PrimeVideo	Youtube	Watch	TV+	XBox One	
		Audio streaming service	Amazon Music	Youtube Music		Apple Music		
		Apps (games + other)		Play	Oculus/Games	Appstore	XBOX live	
		Buy/rent digital content	PrimeVideo	Play		iTunes	Store	
	Production	Gaming viewer stream	Twitch	Youtube			Mixer	
		Audio/Video/Literature	Yes	Yes	Yes	Yes		
		Gaming	Yes	Yes			Yes	
Retail		Physical store	Yes			Yes	Yes	
		eCommerce (3rd party)	Amazon.com		IG Checkout			
		Marketplace	Amazon.com	Shopping	Marketplace			
Advertising		Display	Ads	AdSense	FB Ads			
		Search	Ads	Adwords	FB Ads	SearchAds	BingAds	
		Audience network	Ad?	GMP	FAN			
Connectivity		Drones	Yes	Yes	Yes		Yes	
		Wireless/satellite	Kuiper	Loon	Internet.org			
		Fixed		Fiber	Middle Mile			
Other		Healthcare	Haven/Care			Apple Health	Healthcare	
		Payments	AmazonPay	GooglePay	Libra	ApplePay		
		Pharma	Pillpack	Verily/Calico				
		AV (self-driving)	Aurora/Scout	Waymo		Stealth		

Source: Company announcements, Bernstein analysis



Scale = New Opportunities for “Big Tech”

- The major revenue pools that “big tech” is either currently in, or crossing into, all show decent sized growth opportunities
- This chart (right, Bernstein) was pre-COVID; however, the point is there is still room to run, whether that is now delayed or back-ended is one thing, but the opportunity and growth is still ripe for the large players to take.



Source: eMarketer, Internet Retailer, Gartner, Bernstein estimates and analysis

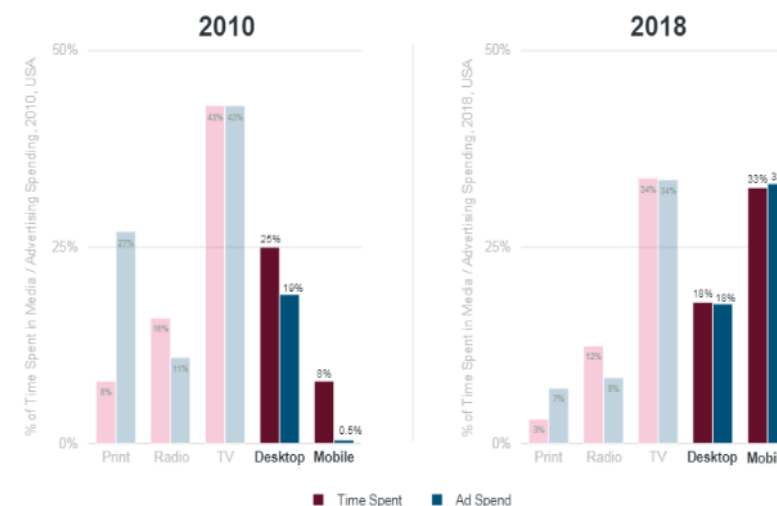


What's The Opportunity for Digital Advertising?

- Mary Meeker (Bond Cap), formerly of Kleiner Perkins, posts annual “Internet Trends” reports. A good chart she posts is time spent per medium and ad dollar mix associated with it. (see right)
- Mobile has finally caught up with time spent and ad dollar mix
- Time spent on mobile devices has grown ~13% CAGR since 2012, to 3 hours, 52 minutes
- TV and PC usage has decline by 3% CAGR over the same period
- **The trend for time spent to shift away from traditional and towards digital will continue**
- How does TV advertising compare to digital?
 - TV typically has a set ad load, such as 12-15 minutes per 60 minute show
 - Internet provides nearly an infinite shelf live of advertising, with flexibility unrivaled by TV
 - TV has shown some pricing power, specifically in highly viewed sporting events or shows, despite declining HH pay-TV subscribers
 - Internet has better audience capture, better targeting (appealing to both large and small advertisers and businesses)
 - Online – people are more “present” and captivated, versus TV is a relaxing activity whereby most multi-task or do something else throughout the ad break

Media Time vs. Advertising Spending =
Mobile @ Equilibrium (2018)...Desktop (2015)

% Time Spent in Media vs. % Advertising Spending



BOND
Internet Trends
2019

Source: Internet & Mobile advertising spend based on IAB & PwC data for full year 2018 & 2019.
Print advertising spend based on Magma Global estimates for full year 2018 & 2019. Print includes newspaper & magazine.
Time spent share data based on eMarketer (2018). Excludes out-of-home, video game & cinema advertising.

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Online Advertising – “the new rent”

- Equivalent to a physical storefront, which needs to have the physical presence to attract customers, pays rent to have the space
- To attract customers in the digital world, they pay a portion of their budget to drive traffic to their “online store” – website, products, services, brand
- Many CMOs and advertisers consider this spend a necessity, similar to a physical storefront rent payment
- Based on many conversations and studies by Bernstein, and other advertising analytics firms, around 70%+ of an overall ad budget goes towards digital ad spend
- Thus, with about 50% globally, and 57% in the U.S., the room to grow is higher
- Also – many of the advertisers in the digital world are incapable of spending similar amounts towards traditional channels and getting a similar ROI – so the room to run as a % of total ad spend should increase higher
- Mobile is the large growth driver of digital advertising, where ~65% of digital ad dollars go currently – and is essentially a duopoly between FB and GOOG; of incremental dollars spent, GOOG and FB both attract around 45%, with AMZN ~10%



End of Free Trial

This is the end of the free trial. If you want to read the entire 260pg+ slide deck on GOOG, please “subscribe” on www.findmevalue.net

Thank you.

FMV