



Internet Advertising Revenue Report

Full-year 2020 results

April 2021

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Summary

1



2020 Annual Report

Optimism despite COVID-19

Over the course of 2020, global GDP declined by 3.5%, with its worst performance since the Great Depression.¹ The first half of the year was particularly hard hit, with spending confidence and economic activity both adversely affected. To avoid negative brand associations or poor return on investments, advertisers became more cautious about the placement of their advertising and reduced spend in certain locations (e.g., in city and business districts).

However, internet advertising revenues showed impressive resilience and recovery over the course of the last six months of 2020. While Q2 YoY growth declined by 5.2%, revenues in Q3 and Q4 more than balanced the scales, returning positive YoY growth figures of 11.7% and 28.7%, respectively. Like previous years, the fourth quarter led the pack for advertising revenue dollars, and 2020's fourth quarter growth rate was particularly impressive with the U.S. elections and holiday season helping to drive growth.

The extent of future disruptions will depend on numerous evolving factors, but bounce-backs are already underway and U.S. business leaders are indicating a positive outlook for the year ahead. 88% of CEOs indicate they believe economic growth will improve during the next 12 months. Most reassuring for this industry, when asked “How do you plan to change your long-term investments in advertising and brand building over the next three years as a result of the COVID-19 crisis?,” 9% of U.S. CEOs said that they thought they would increase investments moderately (3%–9%) and 26% said significantly (≥10%).² There are, therefore, signs that the industry should be well placed for continued growth in the years ahead.

¹ <https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>

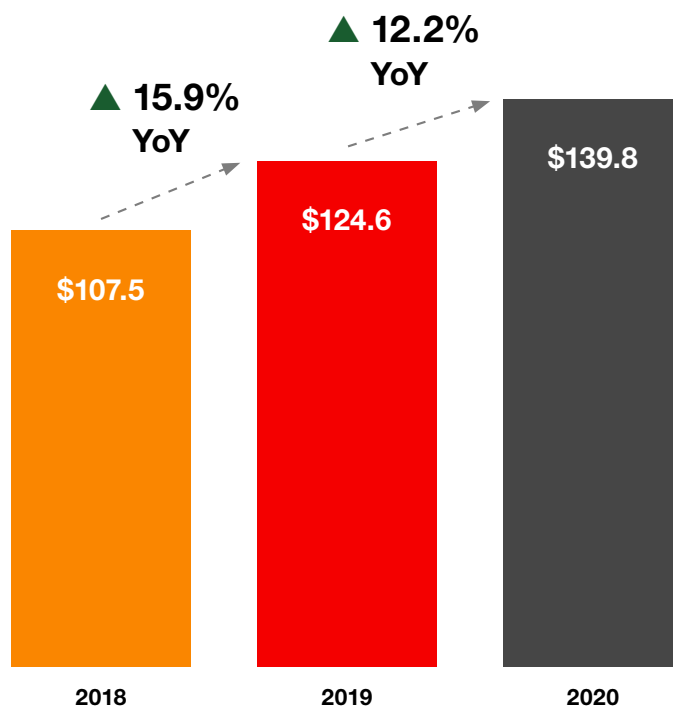
² <https://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2021/report.html>

FY 2019 vs. 2020 internet advertising revenues

A healthy pace of growth in the face of COVID-19

Internet advertising revenues expanded at 12.2% between 2019 and 2020. The decelerated YoY growth rate was expected and could have been much worse given that many organizations faced considerable revenue shortfalls in 2020 (e.g., airlines, hotels) and slashed marketing budgets and short-term advertising.

Three year (FY 2018-FY 2020) internet advertising revenue trend (\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Reflecting on 2020, looking forward to 2021

When COVID-19 began to affect the growth of the U.S. advertising ecosystem in March of 2020, many advertisers slashed marketing budgets or paused advertising campaigns. By Q3 and Q4, early-year declines were fully offset by high growth, albeit only for some sectors and ad types/devices/platforms.

The industry benefited from a surge in the number of digitally connected consumers during the pandemic. The accelerated rate at which consumers are embracing digital consumption creates real growth opportunities—and risks—for the digital advertising ecosystem. 2021 digital advertising will likely build on the momentum from the latter part of 2020, seeing growth in both seemingly pandemic-proof ad formats in addition to new format growth driving consumption across industries.

Key highlights of industry change over the past year:

Digital advertising revenue and growth rate

- Revenue declined in 2020 H1 as predicted but bounced back in H2. Advertising revenues totaled \$59.3 billion in 2020 H1, only a 2.4% increase from 2019 H1. Revenues in Q2 2020 declined 5.2% from Q2 2019.
- Marketers' buying behaviors evolved—and will likely continue to move—from longer-term, significant investments to a nimbler, more agile approach to directing and redirecting ad spend. Time will tell if these behavioral changes become the new norm, but they are expected to have at least a two-year impact.
- Before COVID-19, many expected that emerging technologies like Augmented and Virtual Reality would represent a large opportunity for digital advertising in 2020. The pandemic limited that growth. Although game-changing AR/VR executions didn't occur at scale last year, AR/VR are expected to evolve advertising formats and user experiences in 2021 (e.g., fashion shows, cooking classes, concerts). Per PwC's Entertainment and Media Outlook, VR has a 21.9% forecasted growth rate and is projected to reach \$1.5bn in consumer revenue by 2024. While AR growth forecasts vary, the opportunity to transform shopping (including interactive trial capabilities) is expected to fuel growth and additional marketer attention in 2021. Gaming, connected TV, retail media and 5G-enhanced experiences are also anticipated growth areas in the coming year.
- The industry faced COVID-19 disruption in 2020 without having to adapt to a digital advertising landscape no longer reliant on third-party cookies. Changes in consumer identity and attribution models announced by Google and Apple did not have a material impact in 2020, and are expected to build to a tipping point disruption as ecosystem participants and consumers adapt to new models. Rather than a direct and significant impact immediately, the loss and blocking of identifiers on advertising products, tracking and other capabilities will be felt over time. The digital advertising ecosystem is exploring alternative solutions and new models, with a future industry model and solution yet to be determined. There is a battle cry for a coordinated industry effort to design and execute viable alternatives to privacy and addressability for the long-term health of the industry.



Projected digital advertising trends for 2020 were delayed. Marketers' buying behaviors are evolving from longer-term major investments to a more agile approach of directing and redirecting ad spend.

Mobile

- In 2019, the Internet Advertising Revenue Report projected a deceleration of mobile ad revenue: “Last year (2019) had a 24% increase, which was the lowest YoY growth since 2017 (36%). Even though growth may have reached its peak, there is still untapped potential in this space. The recent proliferation of shoppable ads across different platforms advances the concept.” In 2020 and beyond, shoppable ads still have long-term potential, especially given the proliferation of CTV and digital video. There are also growth opportunities as a result of the massive adoption during the pandemic of ecommerce via mobile and new digital experience offerings. Mobile advertising revenue for FY2020 was \$98.3 billion, a 13.4% increase from the \$86.7 billion in FY2019.
- Consumer journeys evolved during the pandemic, and the industry is responding by delivering more and better ecommerce and digital experiences via mobile. As vaccinations and consumer choices increase, resulting in enhanced ability to engage outside the home, mobile market growth is expected to continue, with increasingly immersive ad experiences expected to help fuel continued growth. Future mobile experiences are expected to add value to in-person consumer experiences as well as online (e.g., in restaurant interactive electronic menus featuring digital video, augmented reality, or even VR visits to the kitchen to hear firsthand about how certain specialty dishes are prepared).
- Looking ahead, we expect mobile to continue to surge as digital consumption and resulting ecommerce transactions have become the new normal and as 5G unlocks new innovations in ad formats.



Mobile was a healthy category in 2020, and that is expected to continue accelerating as people return to the outdoors.

Social

- Last year, the data pointed toward a likely increase in social media's share of advertising revenue, with 2019 bringing this number up to 28.6%. This year, social ad revenues were \$41.5 billion, a 16.3% increase from 2019, which now accounts for 29.6% of overall internet ad revenues.

A seemingly pandemic-proof ad format captured the highest growth rate in 2020.



Digital Video

- In our 2019 report, we recognized the need for innovation to drive growth in Digital Video. Over the past year, we've seen 20.6% growth in Digital Video across mobile and desktop. The majority of growth was on mobile devices, where revenues were \$18.5 billion and 25.3% greater than 2019.

Was 2020 an anomaly or a glimpse into the streaming future? We believe the latter.



Audio is accelerating fast, mainly due to the rise of podcasts.



Audio

- Audio sustained strong growth in 2020, with \$3.1 billion in advertising revenues, almost \$400 million greater than 2019. While not tracked separately in this report, podcast ad revenues were expected to grow 14.7% in 2020 based on the 2020 IAB U.S. Podcast Advertising Revenue Study. Prior to COVID-19, the industry was expecting a growth rate of 29.6% in 2020 and 55% in 2021. The majority of Audio growth was from mobile devices, and revenue increased 14.9% from 2019.

What's next: a vision for the way forward

While there is optimism around the major changes—and resulting growth opportunities—across the entire digital advertising-supported ecosystem, there is also an undercurrent of pessimism driven by the belief that not all players are currently equipped to embrace new operating models. The greatest and most immediate threat to growth of the digital advertising-supported ecosystem is inertia by key players.

IAB and PwC recently published a report, **IAB Outlook: 2021 Digital Ad Ecosystem**, which shares a vision for the way forward over the next three years. Below are six key topics industry leaders are focusing on in the near future:

1. Consumers no longer think the exchange of free content for ad delivery is good enough—the value exchange must be reset

The consumer journey changed course during the pandemic. How consumers engage with brands and content—and think about who they trust with their data—has evolved. As a result, the presumed value exchange of ad-supported media—free content in exchange for seeing ads—is losing its persuasive power. Consumers have grown accustomed to content without interruption from ad-free streaming services like Netflix and Disney+, and so when they do encounter advertising pods that experience may feel too long and too disruptive. At the same time, privacy concerns continue to rise.

2. Trust gap—close it

Strong content moderation and control policies will be key to fostering trust and motivating consumers to continue to share data in a way that amplifies the value they receive from online services. While there are clear benefits to online experiences, there are also clear drawbacks consumers encounter that can impair their perception of brands, including hate speech, fraud, misinformation and more. Organizations within the internet ecosystem must take care of the consumers who engage with them. Creating a safe online environment where both consumers and businesses thrive requires mutually beneficial solutions.

3. Expect more Walled Gardens with higher walls as third-party identifiers go away

Senior executives interviewed recognize that the industry is ill prepared for the loss of third-party cookies and identifiers. Publishers risk losing substantial advertising dollars to Walled Gardens flush with first-party data. Brands struggling to build first-party data supplies may find themselves too reliant on those Walled Gardens in order to connect with consumers.

4. Retail media

Retail media is at the forefront of enabling direct business outcomes. In addition to pivoting to performance-based outcomes, ads must deliver relevant information that enhances (vs. detracts from) the consumer experience—a key success metric for retail media. The opportunity for close-looped measurement, clearly linking ad exposure to sales, is another significant benefit that stands out in an environment with reduced third-party identifiers.

5. Consumer identity alignment

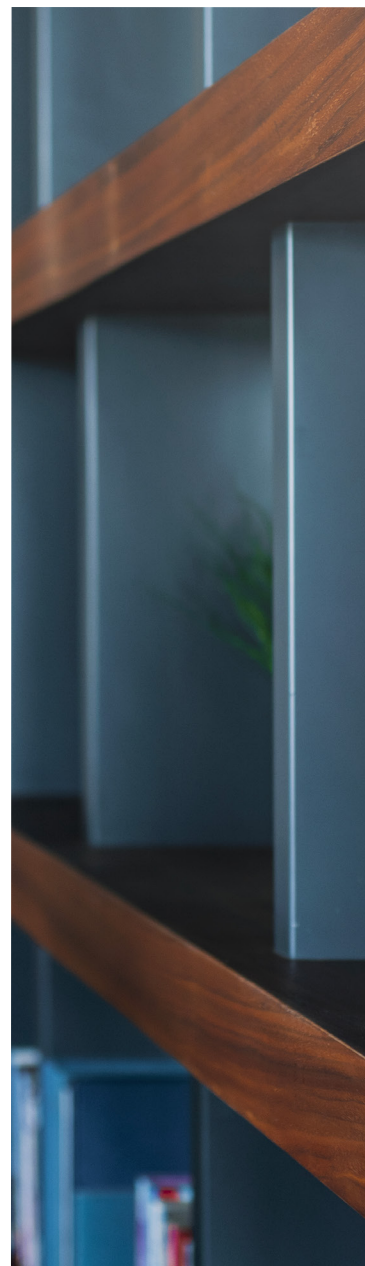
A key opportunity for the industry is to align on the critical component parts of consumer identity (e.g., age brackets for demographics across ad formats, granularity of geographic targeting) for foundational metrics that can be built upon for more sophisticated analytical models (up to “segment of one” targeting). Cross-industry efforts, like the Partnership for Responsible Addressable Media (PRAM), have potential to help unify the industry.

6. Evolution of outcome-based marketing

The industry is at a crossroads. Years of investment in attribution models to connect marketing outcomes to business outcomes (return on ad spend, attributable growth, lifetime value calculations for a customer, etc.) appear to be at risk with the shift away from third-party identity models and evolved data-sharing standards in light of rising privacy regulation. As consumer identity and attribution models evolve, the industry's need to transact on outcome-oriented models in a data-compliant way faces significant headwinds. However, the growth and health of the industry depends on this sort of data. Longer-term outcome-based ad sales—with appropriate data-sharing models—could be largely automated. In the short term, new formats that support clear outcome-based results (e.g., direct-to-consumer publishers at the point of sale sharing data in a compliant way to support outcome-based attribution) are expected to drive growth.

Full-year trends

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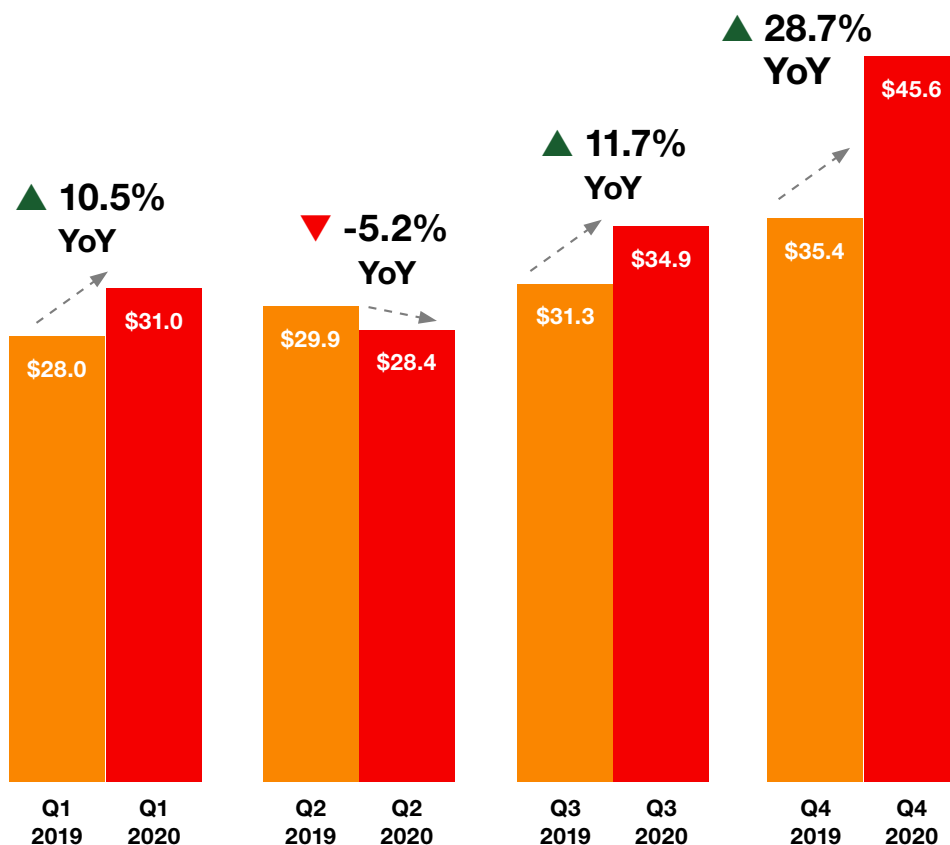


Quarterly growth

Positive overall growth despite Q2 drop

With many U.S. states issuing stay-at-home orders at the end of Q1 2020 and U.S. GDP falling sharply, it's not surprising that Q2 saw the biggest hit in revenue due to COVID-19, which recorded a negative growth rate of 5.2%. However, through the second half of 2020, with consumer confidence and GDP recovering and vaccine rollouts beginning, total revenues rebounded, with Q3 and Q4 revenues totaling \$80.5 billion, an increase of 11.7% and 28.7%, respectively. The \$17.2 billion increase in revenues between Q2 and Q4 of 2020 represents an impressive 60.5% increase in revenues between the two quarters.

2019 vs. 2020 quarterly internet advertising revenues (\$ billions)



Though there were significant fluctuations in quarterly growth throughout the year, revenues rebounded solidly in the second half to a healthy \$80.5 billion.

Source: IAB / PwC Internet Ad Revenue Report, FY 2020

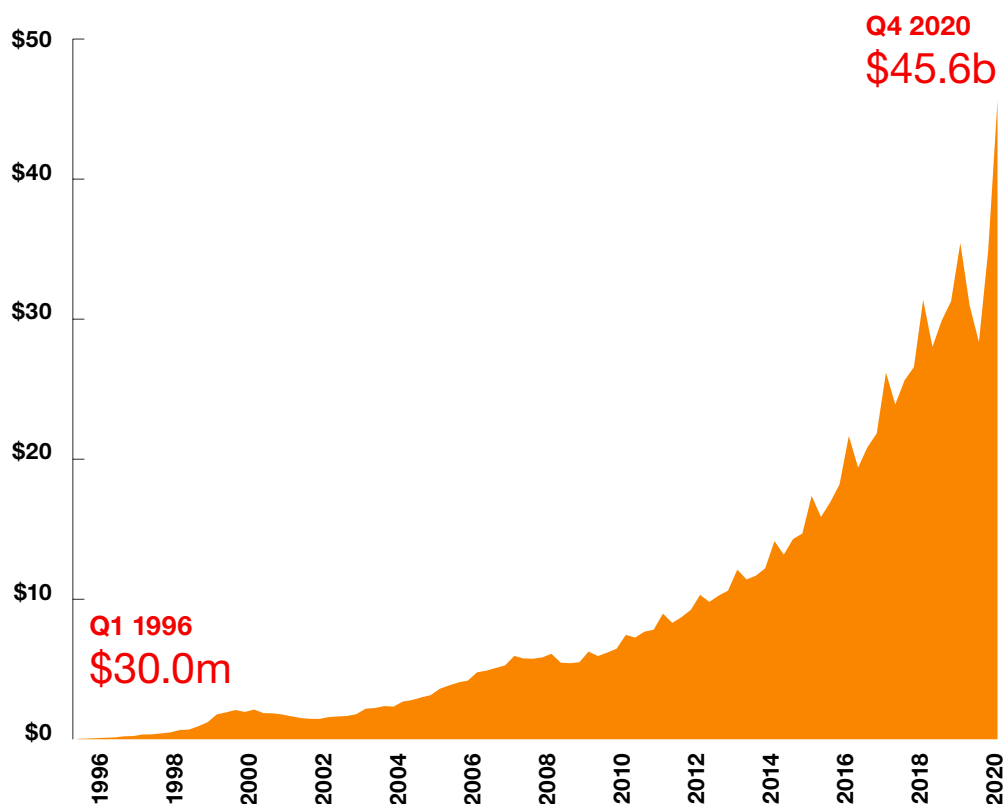
Historical quarterly revenue trends

Political and holiday ad spending spark impressive Q4 recovery

The graph below demonstrates the impact of the pandemic followed by the sharp recovery of ad revenues during 2020. Political and holiday advertising spend combined to deliver the highest Q4 revenue figures to date and helped reduce the impact of COVID-19 on internet advertising revenues over the year.

Quarterly internet advertising revenue growth trends 1996-2020

(\$ billions)



Ad revenues in Q4 were the highest to date, reaching \$45.6 billion.

Source: IAB / PwC Internet Ad Revenue Report, FY 2020

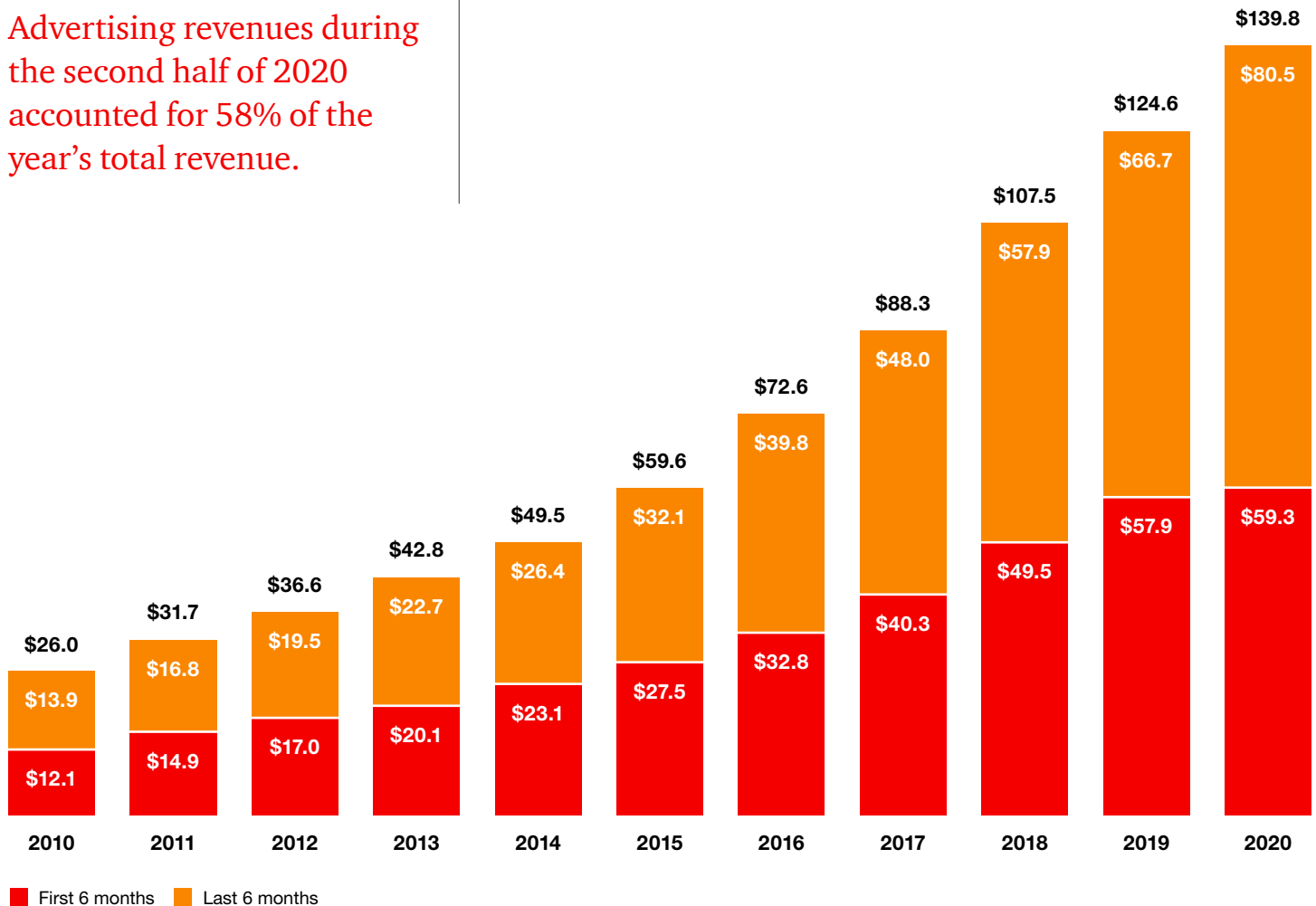
Second-half vs. first-half revenues

Second half 2020 shows best digital ad performance in years

While Q3 and Q4 have historically accounted for a higher proportion of revenue, 2020's second-half performance accounted for almost \$14 billion more than last year and is 41% higher than in 2018. Performance across the last six months is almost entirely the reason for 2020's overall revenue growth.

Historical revenue mix, first half vs. second half (2010-2020)

Advertising revenues during the second half of 2020 accounted for 58% of the year's total revenue.



Note: First and second halves may not add up to total due to rounding.
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

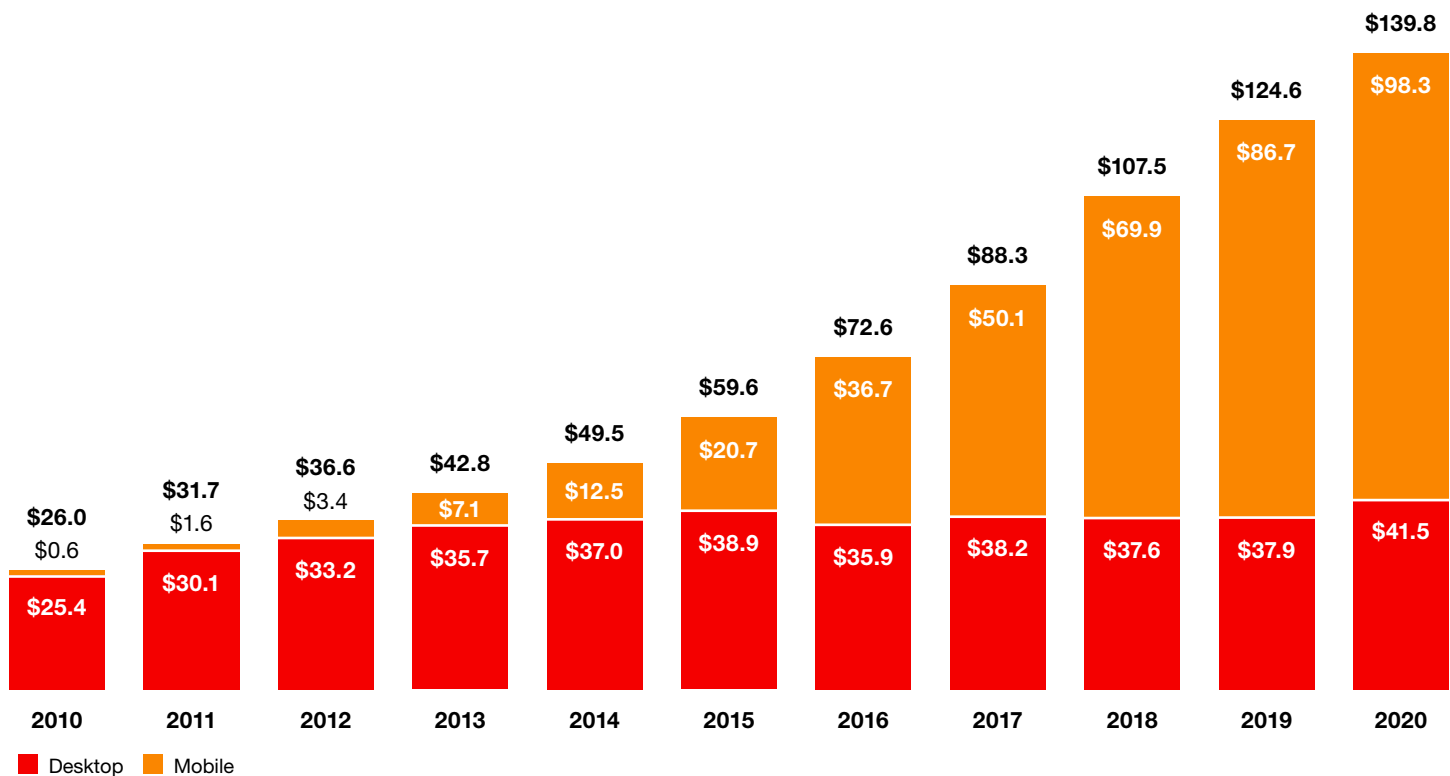
Desktop vs. mobile revenues

Mobile grew and desktop ad revenue spiked to record levels during the pandemic. Growth in share of mobile internet advertising slowed, with only a slight increase from 69.6% in FY2019 to 70.3% in FY2020. While it is acknowledged that the rate of growth for mobile has been slowing over recent years as the underlying platform has matured, 2020 still saw a 13.4% growth in mobile revenues YoY.

Interestingly for desktop, after relatively flat growth for the past few years, revenues were now at their highest levels at \$41.5 billion, a 9.4% growth YoY. The shift to working from home and a reduction in travel this year are likely reasons for the increase in desktop, and it will be interesting to see whether incremental growth continues going forward if full- or part-time remote working becomes a new norm post-pandemic. Online shopping by desktop also increased more than expected in 2020³.

Total internet advertising revenues have seen a compound annual growth rate (CAGR) since 2010 of 18% (a slight drop from 19% when measured between 2010-2019). Mobile CAGR over the same period is 66.5% (a drop from 73.8% between 2010-2019), while desktop growth remains modest at 4.6% CAGR.

Desktop vs. mobile full-year internet ad revenues (2010-2020) (\$ billions)



³ Laptop and desktop purchases dominate online shopping, reflecting the large portion of the workforce currently working remotely.

<https://www.pwc.com/us/en/industries/consumer-markets/library/2020-holiday-outlook/october.html>

<https://www.pwc.com/us/en/library/covid-19/us-remote-work-survey.html>

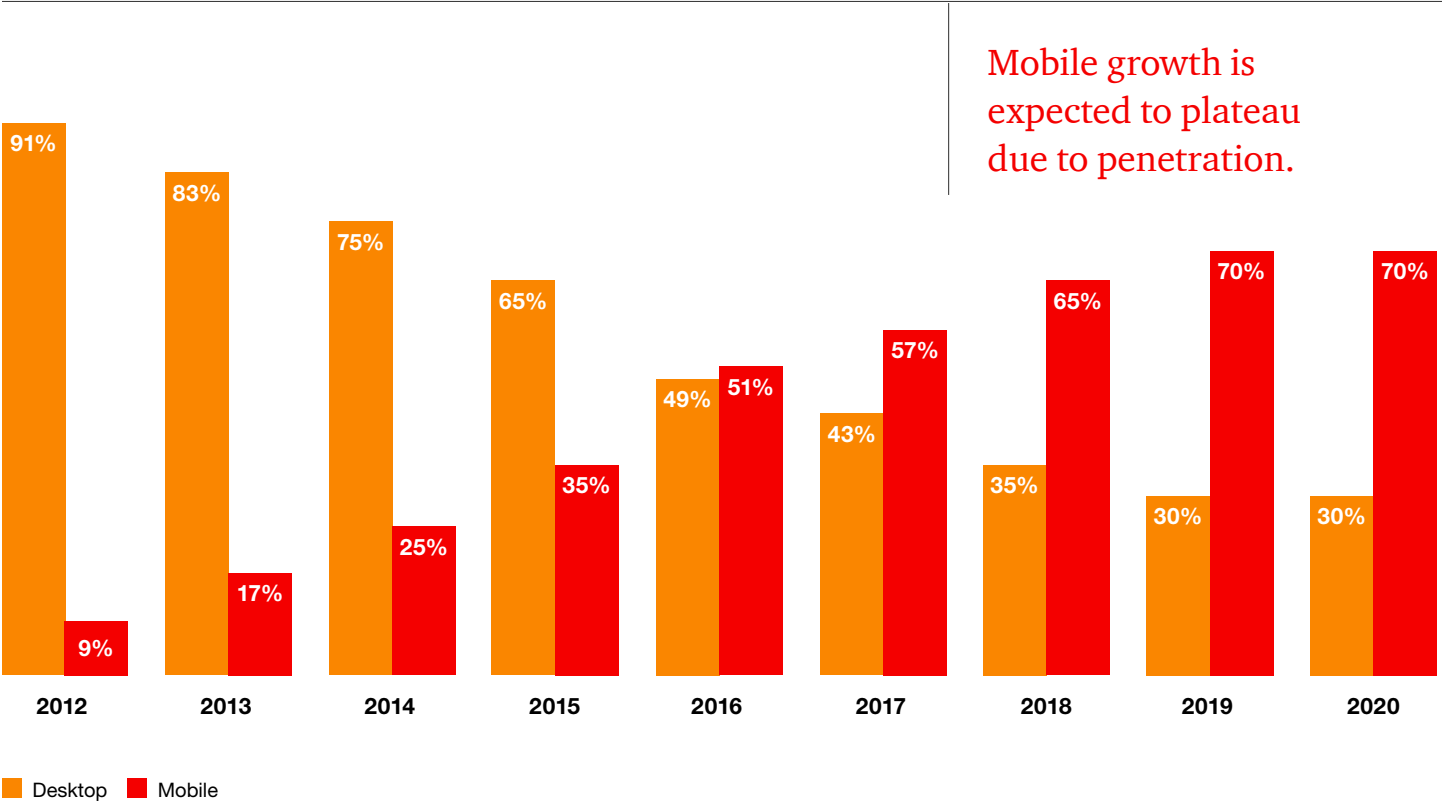
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Desktop vs. mobile, by percentage

\$7 out of every \$10 ad dollars are mobile

Despite desktop's highest recorded internet advertising revenue in over 10 years, \$7 out of every \$10 continues to be derived from a mobile device (smartphone or tablet). This is consistent with 2019, which was the first year that marked insignificant YoY change in percentage share. It remains to be seen whether this leveling off occurs for one year only, as a result of the pandemic, or whether it's the start of more stability in revenues across devices.

Historical desktop vs. mobile trends, full-year results (2012-2020)



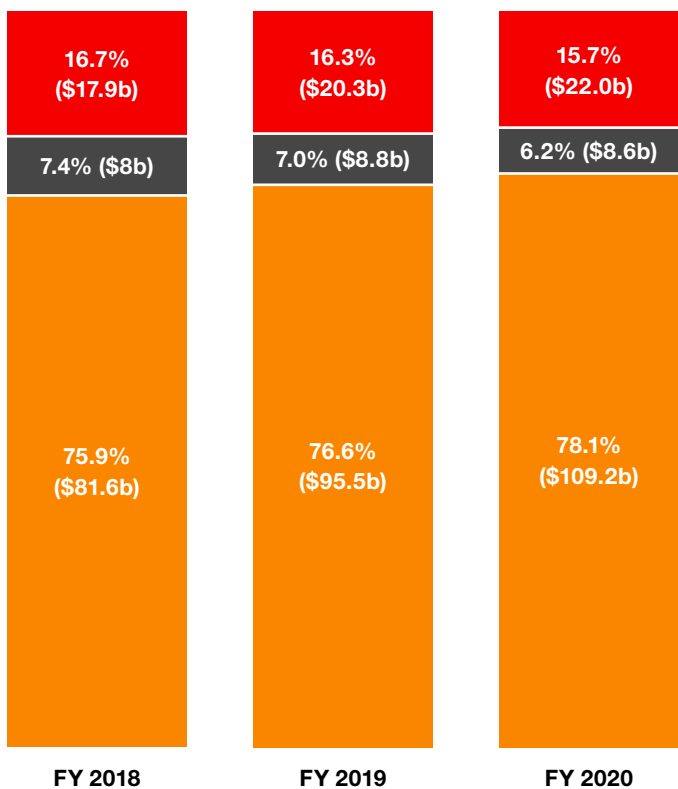
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Revenue concentration

Big companies represent majority of digital ad revenue

As with previous years, the top 10 companies continue to gain market share on a YoY basis, with overall revenues for this group exceeding \$100 billion. Companies ranked 11th to 25th now account for just 6.2% of revenues, while smaller companies make up the remaining 15.7%.

Three year (FY 2018-FY 2020) internet advertising revenue concentration



Overall advertising revenues for the top 10 companies exceed \$100 billion.

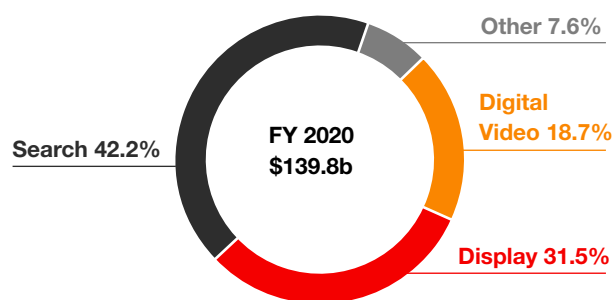
■ Remaining companies (%) ■ 11-25 companies (%) ■ Top 10 companies (%)

Note: Totals may not equal 100% due to rounding.
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

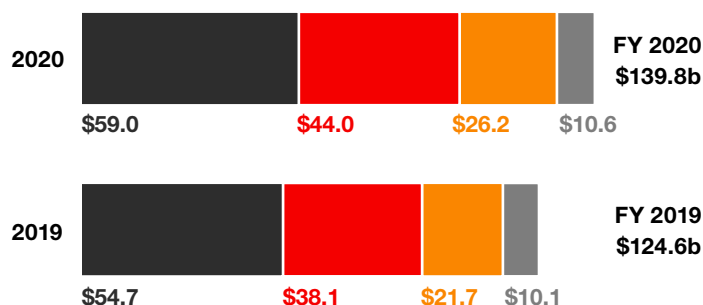
FY 2020 results, by format

Search is still dominant, but Digital Video saw the most growth in revenue and share

2020 advertising format by share



2019 vs. 2020 advertising format, by revenue



Search



\$59b in revenues in 2020, representing an increase of 7.8% since 2019. Search remains the most prominent format, with a 42.2% share of total internet advertising revenue for 2020. However, this is slightly down from 2019 (decrease of 1.7%).

Digital Video



\$26.2b in revenues in 2020. Digital Video has seen a YoY increase of 20.6% since 2019. It now holds an 18.7% share of total internet advertising revenue for 2020, which is an increase of 1.3% since 2019.

Display*



In 2020, revenues totaled \$44b, representing an increase of 15.4% since 2019. Display holds a 31.5% share of total internet advertising revenue for 2020, representing a slight increase of 0.9% share since 2019.

Other



\$10.6b in revenues in 2020, representing an increase of 5.7% since 2019. Other is made up of revenues from classifieds (\$4.1b), lead generation (\$3.4b) and audio (\$3.1b) formats. The category holds a 7.6% share of total internet advertising revenue for 2020, a slight decrease of 0.5% since 2019.

Digital Video experienced the most advertising growth during 2020, with a 20.6% increase in revenue and a 1.3% increase in share.

*Display includes Banner, Rich Media and Sponsorship.
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Q4 2020 ad revenue results, by format

Y/Y, Q4 2020 exceeded ad revenue growth in every format

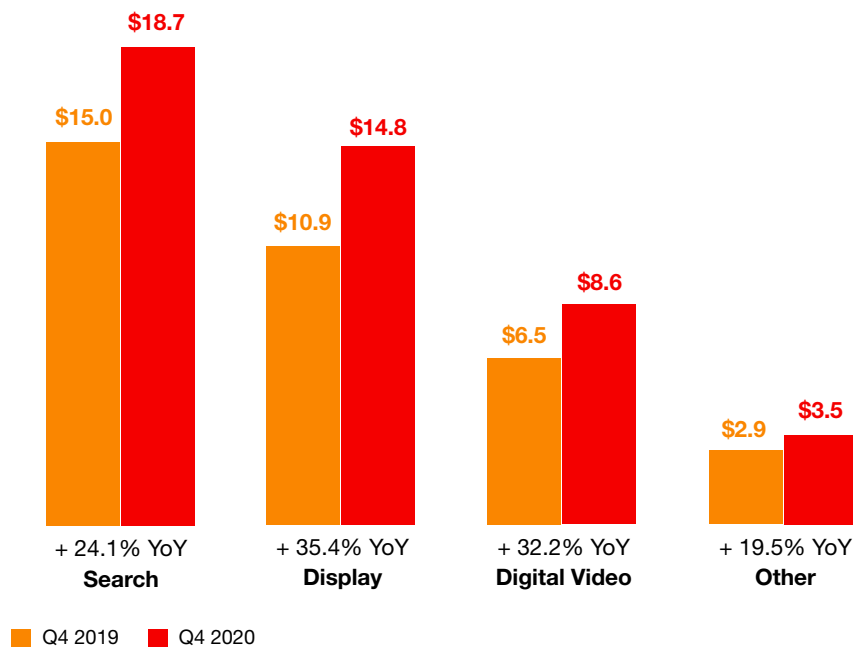
Display format revenues experienced the strongest YoY Q4 percentage growth, up 35.4% since 2019. Actual revenue growth increased \$3.9b compared to Q4 last year, with Display now totaling \$14.8b overall for Q4 2020. Prior to COVID-19, Display growth was plateauing, however, this ad format appears to have benefited from broader trends and pivots in the past year.

Search wasn't far behind in terms of revenue increase, up \$3.7b since Q4 2019. It continues to be the dominant format in terms of market share (despite a slight decrease of 1.5% compared with Q4 2019), holding a 40.9% share for Q4.

Digital Video Q4 revenues experienced similarly strong growth, up 32.2% since Q4 2019.

Other revenues in Q4 2020 saw a 19.5% growth since Q4 2019. Total Q4 2020 revenues of \$3.5b consisted of classifieds (\$1.3b), lead generation (\$1.1b) and audio (\$1.1b).

Q4 2019 vs. 2020 results, by format



During Q4, Display advertising experienced the strongest growth in revenue, but Search, Digital Video and Other also saw notable progress.

Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Formats by device

Mobile video wins the year



Desktop

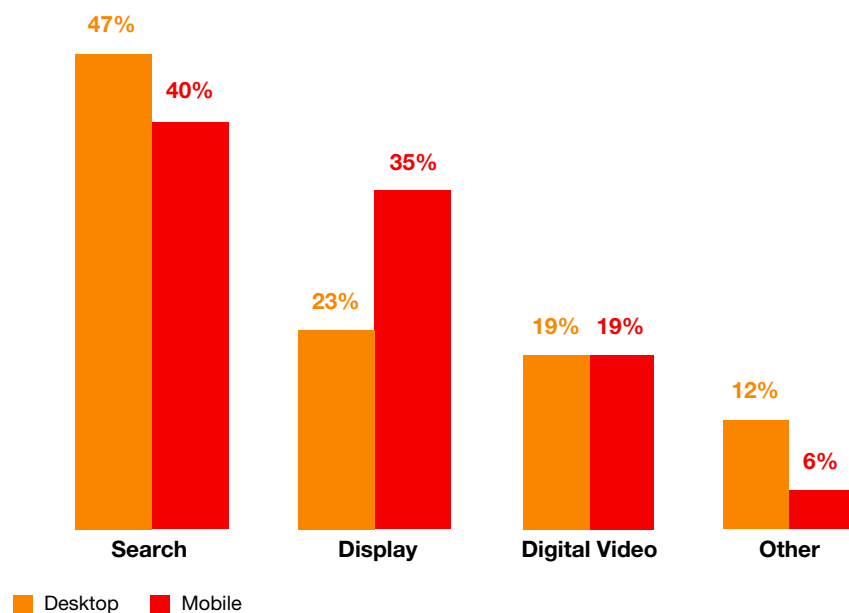
- Search revenue grew 5.8% (totaling \$19.3 billion) year over year, and remains by far the most prominent ad format on desktop (despite desktop share decreasing slightly from 48.1% in 2019 to 46.5% in 2020).
- Display revenue grew most significantly at 22.2%, and overall desktop share increased from 20.3% to 22.6%.
- Digital Video revenue grew 10.5%, totaling \$7.7 million.
- Other market share has remained fairly unchanged since 2019, with revenues increasing by \$80m to \$5.1b in 2020.



Mobile

- Search revenue on mobile has increased by 8.8% since 2019 (totaling \$39.7b in 2020). Like desktop, Search accounts for the biggest proportion of total revenue on mobile.
- Display revenues are not far behind those of Search, constituting a 35% share of all mobile revenues in 2020 (totaling \$34.6b). Market share has remained unchanged since 2019.
- Digital Video revenues on mobile increased by 25.3%, totaling \$18.5b across 2020. This represents the strongest revenue growth across all formats. With market share also increasing (up from 17% in 2019 to 19% in 2020), this will likely be a format to watch moving forward.
- Other revenues have remained more consistent since 2019 (up 9.7%, to a total of \$5.6b in 2020).

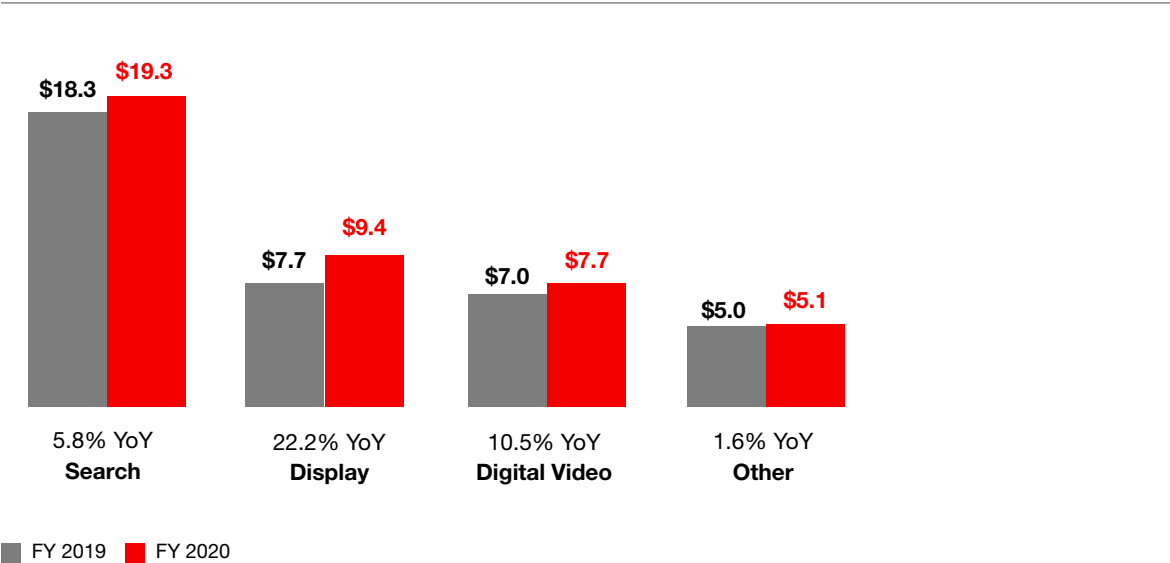
Advertising format share, desktop vs. mobile (2020)



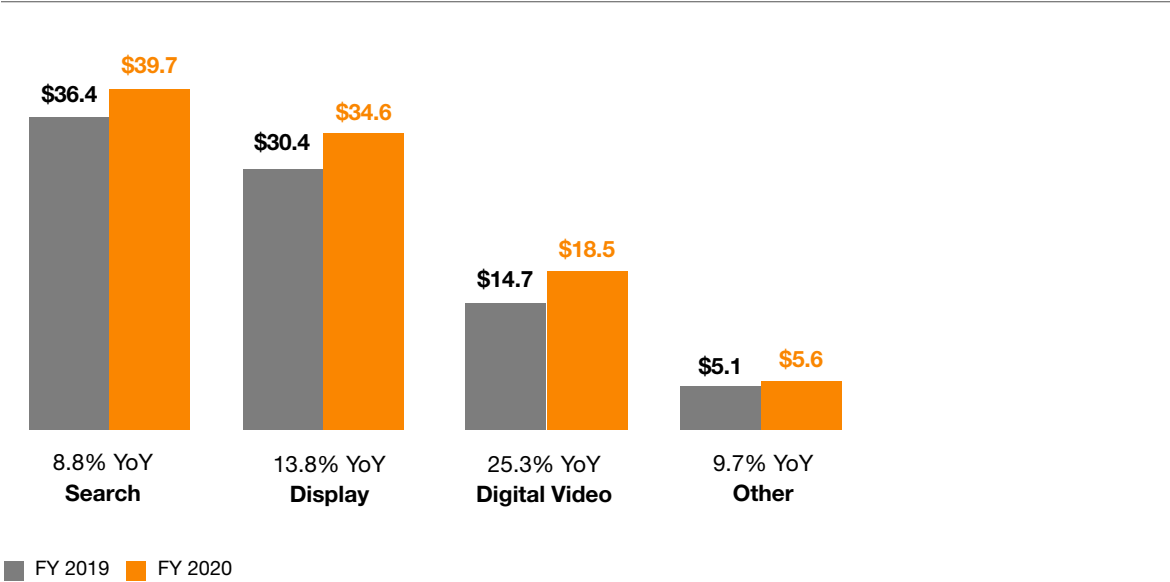
Digital Video revenues on mobile increased by 25.3%, totaling \$18.5b across 2020 and representing the strongest revenue growth across all formats.

Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Desktop revenues, 2019 vs. 2020



Mobile revenues, 2019 vs. 2020



Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Digital Video (desktop vs. mobile)

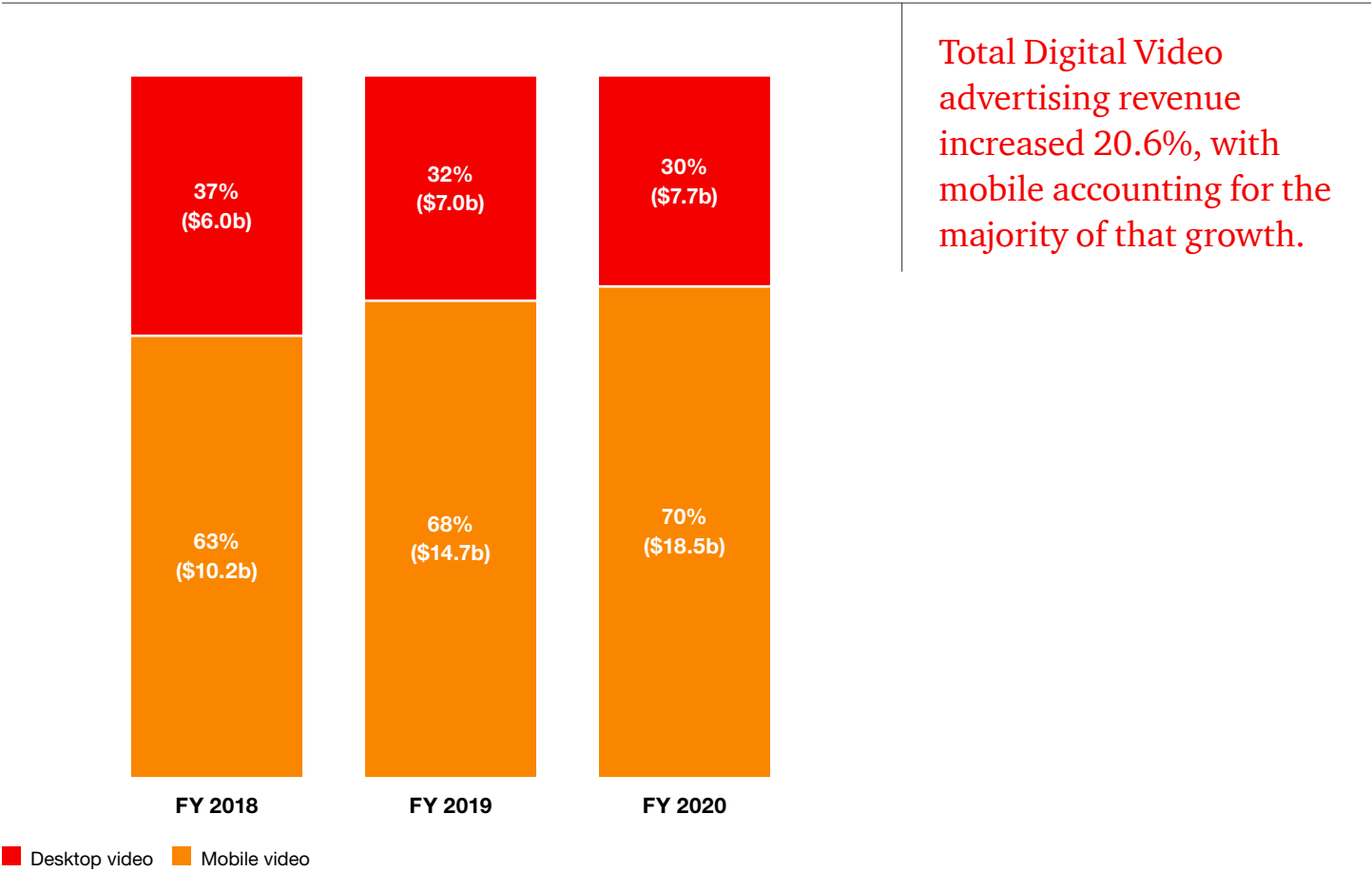
Digital Video takes 2020 by storm

Total Digital Video advertising revenues have increased by \$4.5b (or 20.6%) since 2019, to \$26.2b in 2020. Mobile accounts for the majority (\$18.5b) of Digital Video revenues and continues to grow its share (70% mobile vs. 30% desktop). Revenues from mobile have increased by \$3.7b since 2019, compared with an increase of \$737m on desktop over the same period.

Compared with 2018, total Digital Video advertising revenues are 61% higher in 2020, showing the growing prominence of this format year over year.

Percentage share Digital Video revenues, full-year results (2018-2020)

(\$ billions)



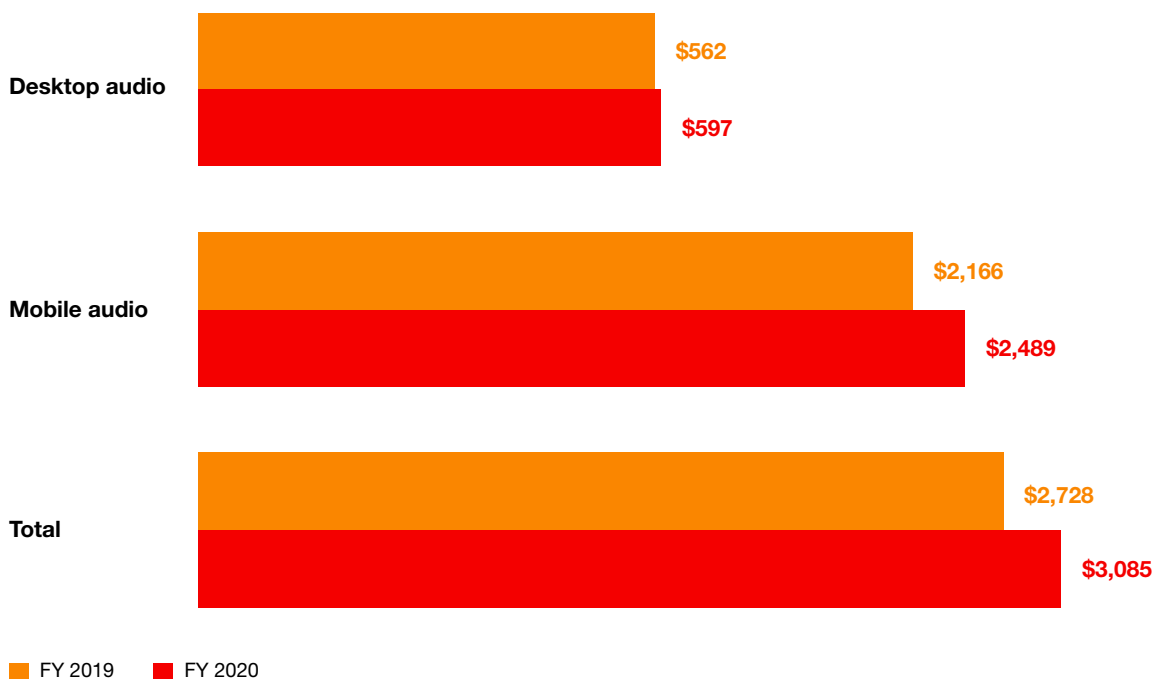
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Audio (desktop vs. mobile)

Beyond the screen: Audio gains ground in mobile

Audio advertising revenue increased by over \$350 million in 2020. This equates to a 13% YoY growth, driven predominantly by increased mobile audio revenues. Desktop audio revenues remain relatively small, with only minor growth over the last four quarters.

Digital audio advertising revenue, full-year results (2019-2020) (\$ millions)



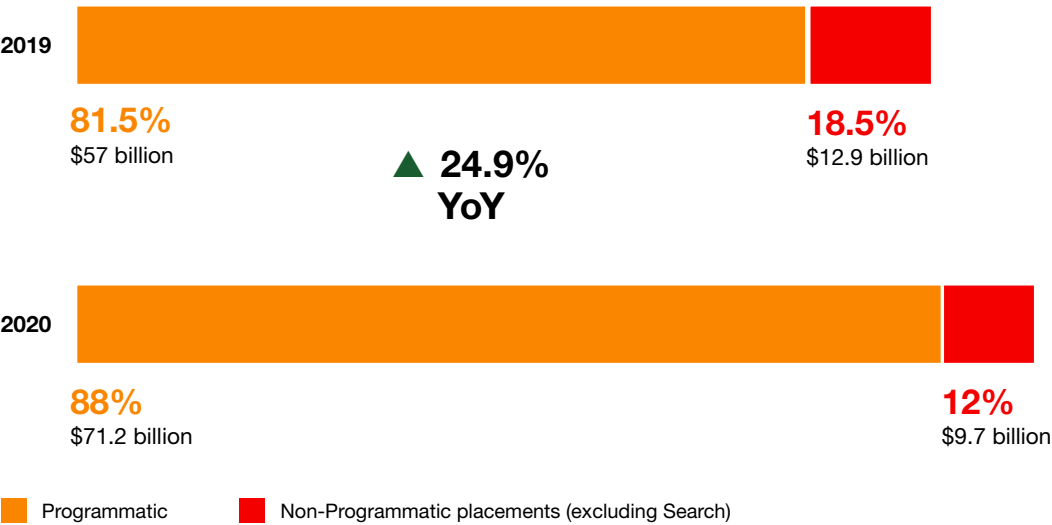
Note: Desktop audio and mobile audio totals may not equal overall total due to rounding.
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Programmatic

The programmatic growth trend continues

Programmatic ad revenues have increased by \$14.2 billion within the last year, an increase of 24.9%. Specifically, Digital Video has seen the largest increase year over year vs. other non-Search advertising methods, as it is starting to play a more prominent role, particularly on mobile devices (see page 18).

Programmatic (excluding Search), full-year results (2019-2020)



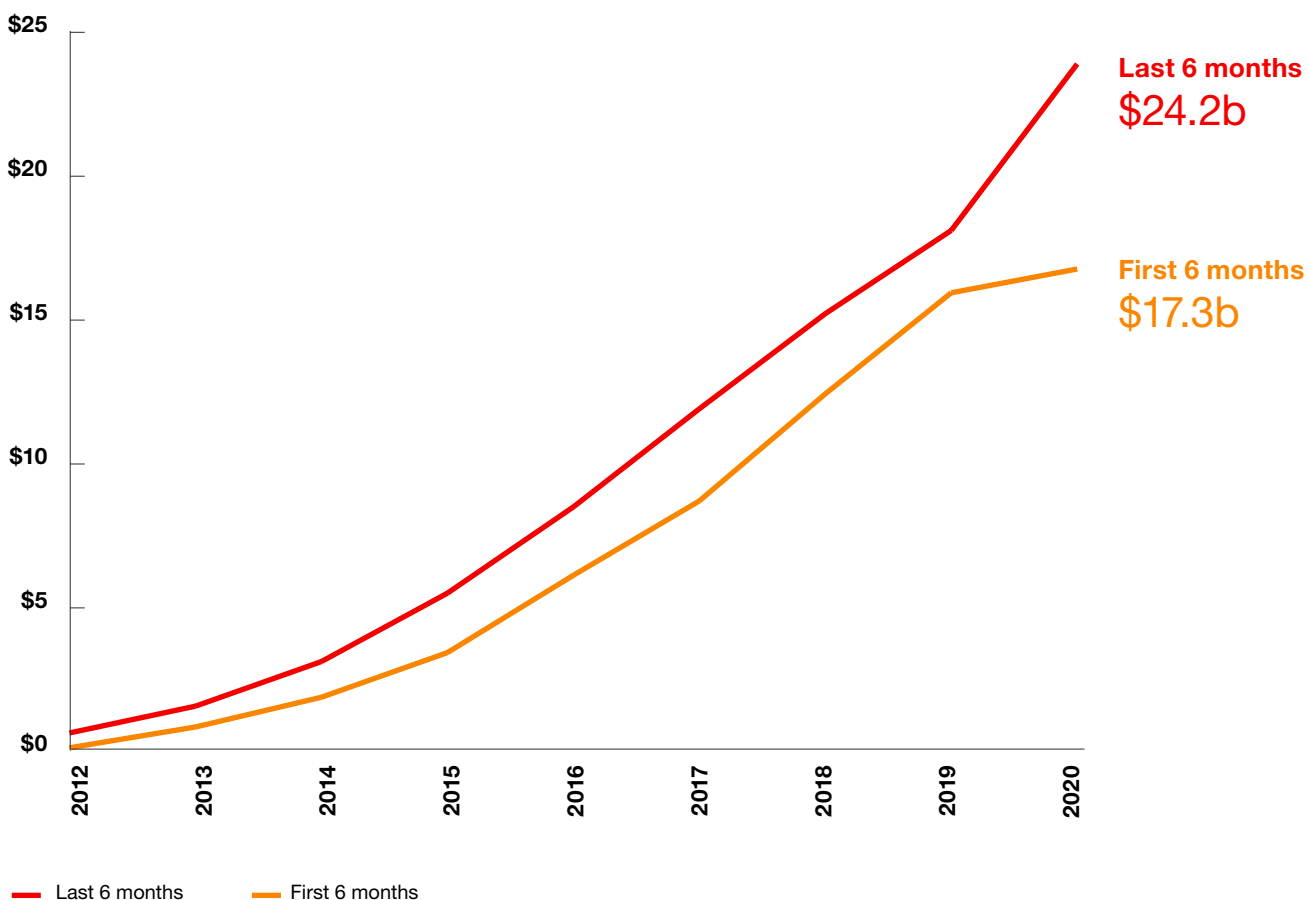
Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Social media

Social media sees notable second-half increase

Social media advertising revenues totaled \$41.5 billion in 2020, an increase of \$5.9 billion; this is in line with a similar increase between 2018 and 2019. Furthermore, second-half revenues for 2020 saw a large increase compared with trends in past years.

Social media advertising revenue, full-year results (2012-2020)
(\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2020

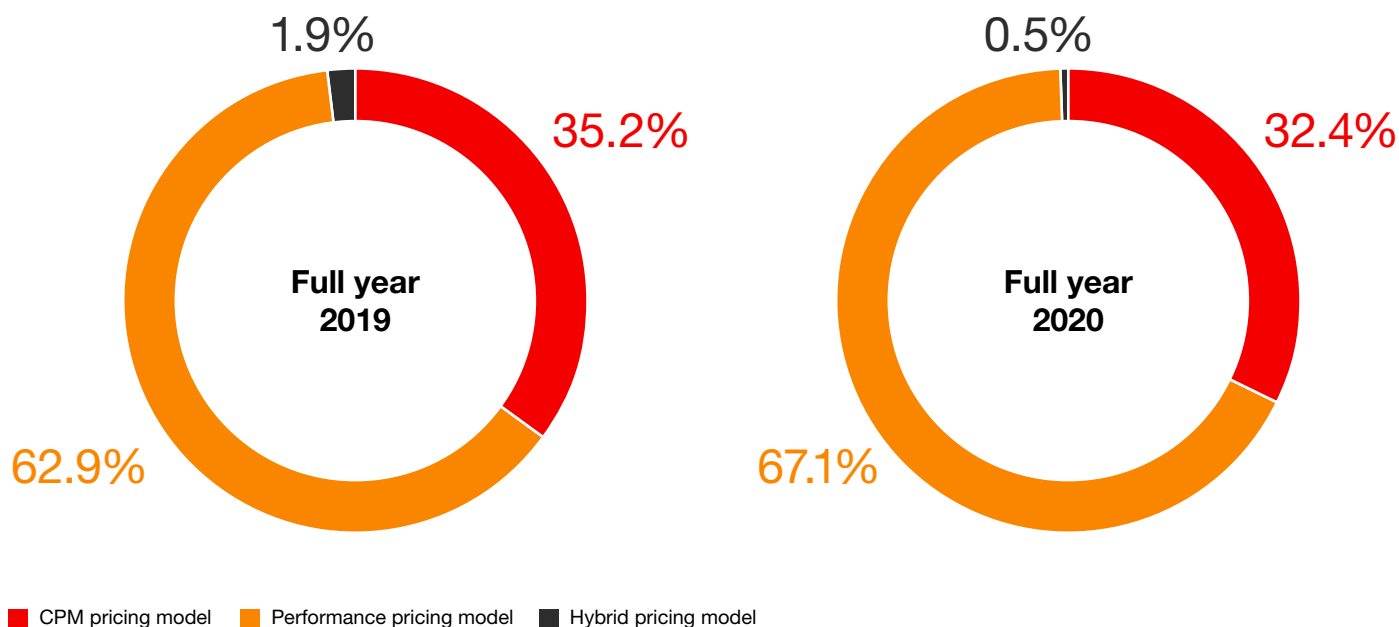
Revenues by pricing model

Paying for results: Performance-based pricing still dominates

The proportion of internet advertising revenues being priced on a performance basis continues to rise, while CPM and hybrid pricing models are far less popular:

- 67.1% of FY 2020 internet advertising revenues were priced on a performance basis, up from 62.9% reported in FY2019
- 32.4% of FY 2020 internet advertising revenues were priced on a CPM basis, a significant drop from 35.2% reported in FY 2019
- 0.5% of FY 2020 internet advertising revenues were priced on a hybrid basis, a further decrease from the 1.9% reported in FY2019

Revenues by pricing model, full-year results (2019-2020)



Performance-based pricing, with its promise of reducing ineffective ad spending, continues to gain traction.

Source: IAB / PwC Internet Ad Revenue Report, FY 2020

Advertising revenues and growth, by media

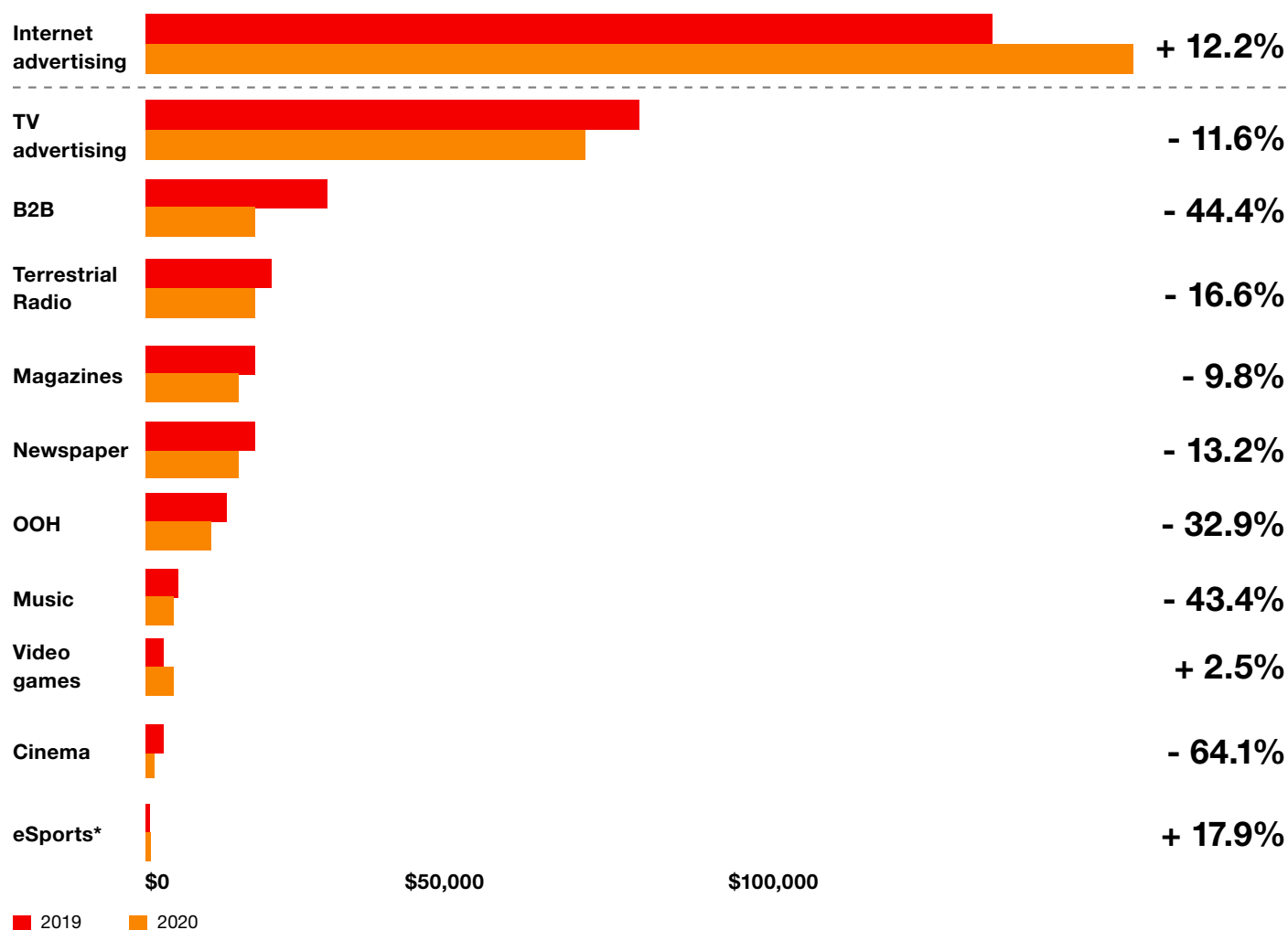
Internet advertising, video games and eSports are the only media types with positive revenue growth between 2019 and 2020

Contrary to prior years, where the majority of media grew at modest rates, 2020 demonstrated which media types were most resilient during COVID-19. Internet advertising, video games and esports were the only media types with positive revenue growth in 2020; eSports had the highest growth at 17.9%.

Advertising revenues and growth, by media (2019 vs. 2020 growth)

(\$ millions)

FY19-FY20 growth



*Because eSports had a lower ad revenue compared to other media types, its impressive growth rate of 17.9%, which eclipsed all the other types from 2019 to 2020, may not be as noticeable in this graph.

Source: Internet advertising data from IAB / PwC Internet Ad Revenue Report, FY 2020

Source: All other data points from PwC Entertainment & Media Outlook

Appendix

3



About the IAB Internet Advertising Revenue Report

Commissioned by the IAB and conducted by PwC Advisory Services LLC (“PwC”) on an ongoing basis, with results released annually, the IAB Internet Advertising Revenue Report was initiated by the Interactive Advertising Bureau (IAB) in 1996.

This report uses data and information reported directly to PwC from companies selling advertising on the internet as well as publicly available corporate data. The results reported are considered to be a reasonable measurement of internet/online/mobile advertising revenues because much of the data is compiled directly from information supplied by companies selling advertising online. The report includes data reflecting desktop and mobile online advertising revenues from websites, commercial online services, ad networks and exchanges, mobile devices and email providers, as well as other companies selling online advertising. The report is conducted independently by PwC, including research by their in-house market research team, on behalf of the IAB. PwC does not audit the information and provides no opinion or other form of assurance with respect to the information. Only aggregate results are published, and individual company information is held in strict confidence with PwC. Further details regarding scope and methodology are provided in the appendix of this report.

Definitions of advertising formats and pricing models

Banner advertising (included in display)	<p>Ad banners (also known as banner ads) are one of the most dominant forms of advertising on the internet. Banner ads are a form of display advertising that can range from a static graphic to a full-motion digital video.</p> <p>The IAB New Standard Ad Unit Portfolio: Lightweight, Cross-Screen and Flexible-Size ads that implement LEAN principles. Ad Types included Horizontal, Vertical, Tiles, Full-Page Portrait, Full-Page Landscape and Feature Phone Sizes.</p>
Sponsorship (included in display)	<p>Advertiser pays for custom content and/or experiences, which may or may not include ad elements such as display advertising, brand logos, advertorial, or pre-roll digital video. Sponsorships fall into several categories:</p> <ul style="list-style-type: none">• Spotlights are custom-built pages incorporating an advertiser's brand and housing a collection of content usually around a theme• Advergaming can range from an advertiser buying all the ad units around a game or a "sponsored by" link to creating a custom branded game experience• Content & Section Sponsorship is when an advertiser exclusively sponsors a particular section of the site or email (usually existing content) re-skinned with the advertiser's branding• Sweepstakes & Contests can range from branded sweepstakes on the site to a full-fledged branded contest with submissions and judging
Search	<p>Fees advertisers pay online companies to list and/or link their company site domain name to a specific search word or phrase (includes paid Search revenues).</p> <ul style="list-style-type: none">• Paid listings—payments made for clicks on text links that appear at the top or side of search results for specific keywords. The more a marketer pays, the higher the position it gets. Marketers only pay when a user clicks on the text link.• Contextual search—payments made for clicks on text links that appear in an article based on the context of the content, instead of a user-submitted keyword. Payment only occurs when the link is clicked.• Paid inclusion—payments made to guarantee that a marketer's URL is indexed by a search engine (i.e., advertiser isn't paid only for clicks, as in paid listings).• Site optimization—payments made to optimize a site in order to improve the site's ranking in search engine results pages (SERPs). (For example, site owner pays a company to tweak the site architecture and code, so that search engine algorithms will better index each page of the site).
Lead generation	<p>Fees paid by advertisers to online companies that refer qualified potential customers (e.g., auto dealers that pay a fee in exchange for receiving a qualified purchase inquiry online) or provide consumer information (demographic, contact, behavioral) where the consumer opts in to being contacted by a marketer (email, postal, telephone, fax). These processes are priced on a performance basis (e.g., cost per action, per lead or per inquiry), and can include user applications (e.g., for a credit card), surveys, contests (e.g., sweepstakes) or registrations.</p>

Definitions of advertising formats and pricing models

Classifieds and auctions

Fees paid to advertisers by online companies to list specific products or services (e.g., online job boards and employment listings, real estate listings, automotive listings, auction-based listings, yellow pages).

Rich media (included in display)

Interactive features that engage the user and initiate new content experiences. Interactive features could be animation or elements that trigger ad expansion or digital video play or other interactive experiences. Rich media experiences that require files or creative assets in addition to initial load and subload limits should be user initiated. This definition also includes any advertising experience where visiting a website in an initial browser window initiates a secondary browser window to deliver an ad impression directly above the initial browser window.

The IAB New Standard Ad Unit Portfolio: Lightweight, Cross-Screen and Flexible-Size ads that implement LEAN principles. Ad Types included Horizontal, Vertical, Tiles, Full-Page Portrait, Full-Page Landscape and Feature Phone Sizes.

Video commercials that appear in video players are considered digital video ads, not rich media.

“Interstitials” are defined as between-the-page ad units that display as a user navigates from one webpage to the next webpage. The ad appears after the user leaves the initial page, but before the target page displays on the user’s screen. The ad is self-contained within its own browser window and may not appear as an overlay on the target page content. Forms of interstitials can include a variation of the following terms:

- Splash screens—a preliminary page that precedes the regular home page of a website and usually promotes a particular site feature or provides advertising. A splash page is timed to move onto the home page after a short period of time.
 - Superstitials—ads that are distinct from interstitials because of the much higher ad quality and because they play instantly (ads are fully downloaded before they are displayed)
 - Expandable ads—rich media ads that can be enlarged to dimensions beyond the initial dimensions of the placement they fill on the webpage. The user initiates expanding events, sometimes after the ad initially expands briefly on its own to catch the user’s attention.
 - Overlay: an ad unit that displays over the webpage content briefly when initiated
 - Pop-up ads and pop-under ads—an advertisement that appears in a separate window that automatically loads over an existing content window, without an associated banner
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Definitions of advertising formats and pricing models

Digital audio	<p>Refers to partially or entirely advertising-supported audio content available to consumers on a streaming or downloaded basis, delivered via the wired or mobile internet. This includes a wide range of services, such as the following:</p> <ul style="list-style-type: none">• Online audio streams of terrestrial radio broadcasts• Online-only streaming radio stations with either professional or amateur DJs and/or hosts• On-demand, streamed audio services that create playlists of artists, tracks and/or genres based on user preferences without human editors or DJs• Downloaded audio content accessed via a website or hosting application for time-shifted listening (e.g., podcasts)• Music or spoken-word audio content delivered within a different website or application (e.g., in-game music services)
Digital video advertising	<p>Advertising that appears before, during or after digital video content in a video player (i.e., pre-roll, mid-roll, post-roll video ads). Digital video ads include TV commercials online and can appear in streaming content or in downloadable video. Display-related ads on a page (that are not in a player) that contain video are categorized as rich media ads.</p>
Mobile advertising	<p>Advertising tailored to and delivered through wireless mobile devices such as smartphones, feature phones (e.g., lower-end mobile phones capable of accessing mobile content) and media tablets. Typically taking the form of static or rich media display ads, text messaging ads, search ads, or audio/video spots, such advertising generally appears within mobile websites (e.g., websites optimized for viewing on mobile devices), mobile apps (e.g., applications for smartphones running proprietary or open operating systems), text messaging services (i.e., SMS, MMS) or within mobile search results (i.e., 411 listings, directories, mobile-optimized search engines).</p> <p>Mobile advertising formats include: search, display-related (banner ads, digital video, sponsorships and rich media) and other formats (lead generation, classifieds and directories, and audio) advertising served to mobile devices.</p>
Social media advertising	<p>Advertising delivered on social platforms, including social networking and social gaming websites and apps, across all device types, including desktop, laptop, smartphone and tablet</p>
Impression-based	<p>Cost-per-thousand (CPM) pricing model</p>
Performance-based	<p>Cost-per-click, sale, lead, acquisition or application (e.g., credit card application) or straight revenue share (e.g., % commission paid upon sale)</p>
Hybrid	<p>Any mix of impression-based pricing plus performance-based compensation within one ad campaign</p>

Survey scope and methodology

Survey scope

The Interactive Advertising Bureau (IAB) retained PwC to establish a benchmark for measuring the growth of internet/online/mobile advertising revenues. The IAB Internet Advertising Revenue Report is part of an ongoing IAB mission to provide an accurate barometer of internet advertising growth.

To achieve differentiation from existing estimates and accomplish industry-wide acceptance, key aspects of the survey include:

- Obtaining historical data directly from companies generating internet/online/mobile advertising revenues;
- Making the survey as inclusive as possible, encompassing all forms of internet/online/mobile advertising, including websites, consumer online services, ad networks and exchanges, mobile devices and email providers; and
- Ensuring and maintaining a confidential process, releasing only aggregate data.

PwC performs the following:

- Compiles a database of industry participants selling internet/online and mobile advertising revenues;
 - Conducts a quantitative mailing survey with leading industry players, including web publishers, ad networks and exchanges, commercial online service providers, mobile providers, email providers and other online media companies;
 - Acquires supplemental data through the use of publicly disclosed information;
 - Requests and compiles several specific data items, including monthly gross commissionable advertising revenue by industry category and transaction-type;
 - Identifies non-participating companies and applies a conservative revenue estimate based on available public sources; and,
 - Analyzes the findings and identifies and reports key trends.
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Historical data findings

Annual and quarterly revenue growth

	Revenue (in mil)	Q/Q growth	Y/Y growth
Q1 2003	\$1,632	3%	7%
Q2 2003	\$1,660	2%	14%
Q3 2003	\$1,793	8%	24%
Q4 2003	\$2,182	22%	38%
Total 2003	\$7,267		21%
Q1 2004	\$2,230	2%	37%
Q2 2004	\$2,369	6%	43%
Q3 2004	\$2,333	-2%	30%
Q4 2004	\$2,694	15%	24%
Total 2004	\$9,626		33%
Q1 2005	\$2,802	4%	25%
Q2 2005	\$2,985	7%	26%
Q3 2005	\$3,147	5%	35%
Q4 2005	\$3,608	15%	34%
Total 2005	\$12,542		30%
Q1 2006	\$3,848	7%	37%
Q2 2006	\$4,061	6%	36%
Q3 2006	\$4,186	3%	33%
Q4 2006	\$4,784	14%	33%
Total 2006	\$16,879		35%
Q1 2007	\$4,899	2%	27%
Q2 2007	\$5,094	4%	25%
Q3 2007	\$5,267	3%	26%
Q4 2007	\$5,946	13%	24%
Total 2007	\$21,206		26%
Q1 2008	\$5,765	-3%	18%
Q2 2008	\$5,745	0%	13%
Q3 2008	\$5,838	2%	11%
Q4 2008	\$6,100	4%	2%
Total 2008	\$23,448		11%
Q1 2009	\$5,468	-10%	-5%
Q2 2009	\$5,432	-1%	-5%
Q3 2009	\$5,500	1%	-6%
Q4 2009	\$6,261	14%	3%
Total 2009	\$22,661		-3%
Q1 2010	\$5,942	-5%	9%
Q2 2010	\$6,185	4%	14%
Q3 2010	\$6,465	5%	18%
Q4 2010	\$7,449	15%	19%
Total 2010	\$26,041		15%
Q1 2011	\$7,264	-2%	22%
Q2 2011	\$7,678	6%	24%
Q3 2011	\$7,824	2%	21%
Q4 2011	\$8,970	15%	20%
Total 2011	\$31,736		22%

	Revenue (in mil)	Q/Q growth	Y/Y growth
Q1 2012	\$8,307	-7%	14%
Q2 2012	\$8,722	5%	14%
Q3 2012	\$9,236	6%	18%
Q4 2012	\$10,307	12%	15%
Total 2012	\$36,572		15%
Q1 2013	\$9,806	-5%	18%
Q2 2013	\$10,260	5%	18%
Q3 2013	\$10,609	3%	15%
Q4 2013	\$12,106	14%	17%
Total 2013	\$42,781		17%
Q1 2014	\$11,414	-6%	16%
Q2 2014	\$11,678	2%	14%
Q3 2014	\$12,207	5%	15%
Q4 2014	\$14,152	16%	17%
Total 2014	\$49,451		16%
Q1 2015	\$13,179	-7%	16%
Q2 2015	\$14,302	9%	23%
Q3 2015	\$14,688	3%	20%
Q4 2015	\$17,382	18%	23%
Total 2015	\$59,551		20%
Q1 2016	\$15,872	-9%	20%
Q2 2016	\$16,917	7%	18%
Q3 2016	\$18,204	8%	24%
Q4 2016	\$21,647	19%	25%
Total 2016	\$72,640		22%
Q1 2017	\$19,404	-10%	22%
Q2 2017	\$20,847	7%	23%
Q3 2017	\$21,832	5%	20%
Q4 2017	\$26,183	20%	21%
Total 2017	\$88,266		22%
Q1 2018	\$23,913	-9%	23%
Q2 2018	\$25,628	7%	23%
Q3 2018	\$26,573	4%	22%
Q4 2018	\$31,373	18%	20%
Total 2018	\$107,487		22%
Q1 2019	\$28,019	-11%	17%
Q2 2019	\$29,898	7%	17%
Q3 2019	\$31,271	5%	18%
Q4 2019	\$35,425	13%	13%
Total 2019	\$124,613		16%
Q1 2020	\$30,952	-12.6%	10.5%
Q2 2020	\$28,350	-8.4%	-5.2%
Q3 2020	\$34,925	23.2%	-11.7%
Q4 2020	\$45,601	30.6%	28.7%
Total 2020	\$139,828		12%

Source: IAB/PwC Internet Ad Revenue Report, FY 2020

About the Internet Advertising Bureau

The Interactive Advertising Bureau (IAB) empowers the media and marketing industries to thrive in the digital economy. Its membership comprises more than 650 leading media companies, brands and the technology firms responsible for selling, delivering and optimizing digital ad marketing campaigns. The trade group fields critical research on interactive advertising, while also educating brands, agencies and the wider business community on the importance of digital marketing. In affiliation with the IAB Tech Lab, IAB develops technical standards and solutions. IAB is committed to professional development and elevating the knowledge, skills, expertise and diversity of the workforce across the industry. Through the work of its public policy office in Washington, D.C., the trade association advocates for its members and promotes the value of the interactive advertising industry to legislators and policymakers. Founded in 1996, IAB is headquartered in New York City.

The IAB Global Network brings together 45 national IABs and three regional IABs to share challenges, develop global solutions and advance the digital advertising industry worldwide. IABs are located in North America, South America, Africa, Asia, Asia Pacific and Europe. Each association is independently owned and operated, functioning under bylaws consonant with local market needs.

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PwC's technology, media and telecommunications practice

As business, accounting and tax advisors to many of the world's leading technology, media and telecommunications (TMT) companies, PwC (www.pwc.com/us/tmt) has an insider's view of trends and developments driving the industry. With approximately 1,200 practitioners serving TMT clients in the United States, PwC is deeply committed to providing clients with industry experience and resources. In recent years, our work in TMT has included developing strategies to leverage digital technology, identifying new sources of financing and marketplace positioning in industries characterized by consolidation and transformation. Our experience reaches across all geographies and segments, including broadband, wireless, film, television, music, publishing, advertising, gaming, sports, theme parks, computers and networking, software and technology services. With thousands of practitioners around the world, we're always close at hand to provide deep industry knowledge and resources.

Our services include:

- Business assurance services
- Web audience measurement and advertising delivery auditing and advisory
- IAB Measurement Certification Compliance auditing
- Privacy policy structuring, attestation and compliance advisory
- Mergers & acquisitions assistance
- Tax planning and compliance
- Capital sourcing and IPO assistance
- Marketing & media operations enablement

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