



Internet Advertising Revenue Report

Full-year 2022 results
April 2023

www.iab.com
www.pwc.com/e&m



Table of Contents

Summary

Introduction	4
2022 vs. 2021 internet advertising revenues	5
2022 highlights	6
State of the Industry: 2023 and beyond	8

Full-year trends

Quarterly growth	11
Second half vs. first half revenues	12
Desktop vs. mobile revenues	13
Revenue concentration	14
2022 results, by format	15
Growth by advertising format	16
Programmatic	17
Social media	18
Advertising revenues and growth, by media (digital and non-digital media)	19

Appendix

About the IAB Internet Advertising Revenue Report	21
Definitions of advertising formats	22
Definitions of advertising media from PwC's Entertainment and Media Outlook	24
Survey scope and methodology	25
Historical data findings	26
About IAB	28
PwC's technology, media and telecommunications practice	30
PwC Research	31

Summary

1



Introduction

2022 was a challenging year for the U.S. economy. With inflation rates closing out notably higher than 2019 and 2020 levels at 6.5%¹, and the residual effects of the pandemic and lockdowns, it is not surprising that at year end the economy was only 1% larger than the latter months of 2021². As a result of slowed economic growth, mass layoffs at big tech companies, and an overall sense of market uncertainty, industries both in the U.S. and globally began to draw back on marketing budgets in the latter half of 2022.

In 2022, the digital advertising industry showed resilience in the face of a strained economy, with ad revenues year-over-year (YoY) securing double digit growth and totaling over \$200 billion for the first time. The industry started out with a strong Q1, where YoY revenues came in 21.1% higher than the record start to 2021. Yet for the remaining quarters of the year the industry saw lower levels of growth, reflecting broader economic trends. Additionally, throughout the course of 2022 the digital advertising industry experienced substantial changes, such as Apple's App Tracking Transparency (ATT) feature being live for the entire of 2022, the adoption of Consumer Privacy Rights Act of 2022 (CPRA) in California and the introduction of 5 new state-level privacy laws that will be in effect by mid 2023. These factors have likely played a part in impacting ad revenues of the biggest players in the digital advertising space, through either restricting targeting capabilities or disrupting the market. Similarly, the upsurge of retail media networks and their strong revenue growth seen in 2022 has also left some big players grappling for their legacy market share.

The industry's outlook for 2023 will be promising if it can comply with evolving privacy regulations and adapt to growing consumer usage patterns and expectations, such as ad-supported streaming and retail media. These factors, compounded with economic uncertainty, underscores the importance of finding alternative, efficient ways to reach and measure audiences with fewer identifiers.

¹ US Inflation Calculator (April 2023.) *Current US Inflation Rates: 2000-2023*

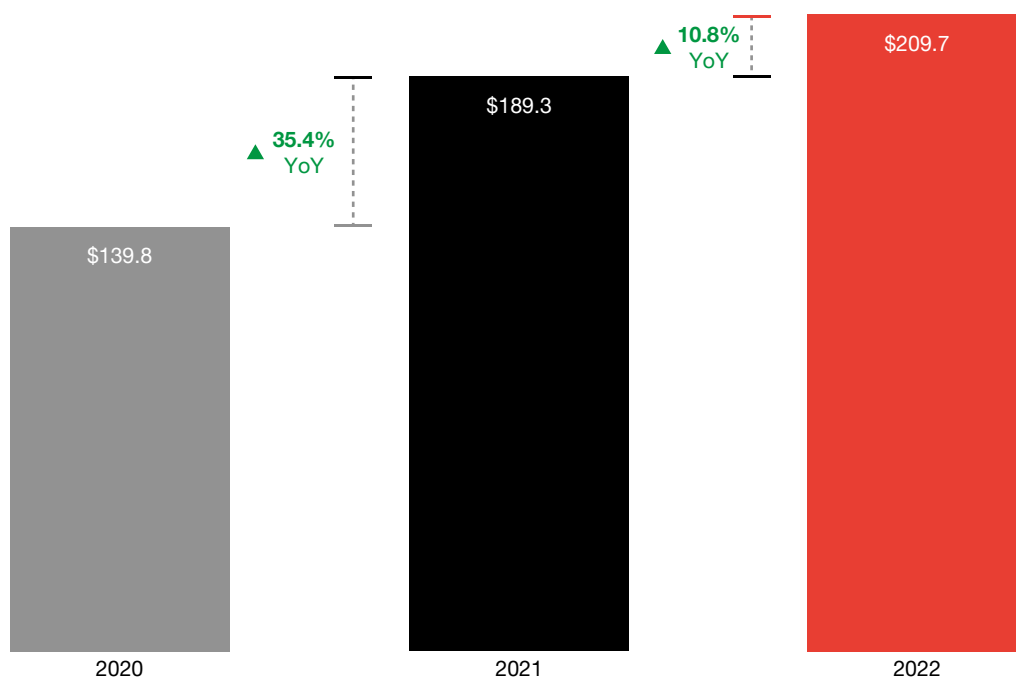
² Horsley, S. (January 2023.) *The U.S. economy ended 2022 on a high note. This year is looking different.* NPR

2022 vs. 2021 internet advertising revenues

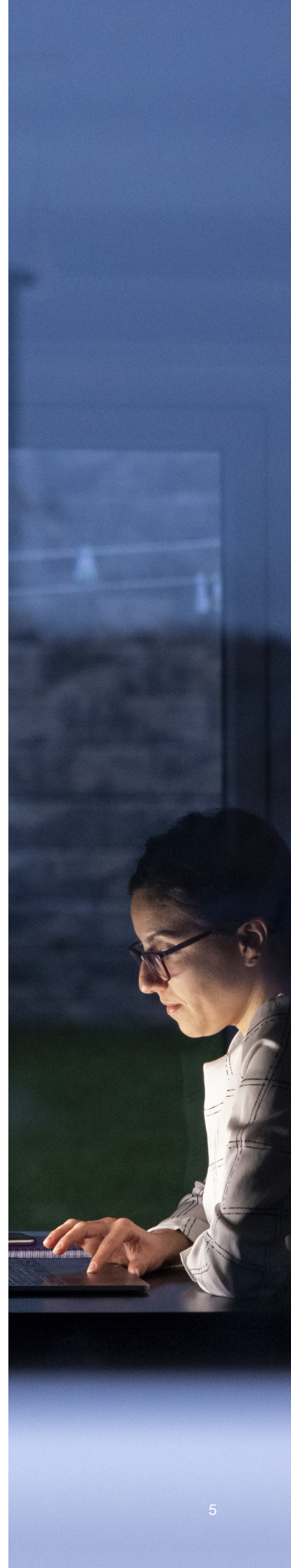
Internet advertising revenue growth slowed in 2022 after tremendous growth in 2021, however, revenues still increased YoY

Between 2021 and 2022 internet advertising revenues grew 10.8% year-over year (YoY) totalling \$209.7 billion. After seeing exponential growth coming out of the pandemic, the highest level of growth seen since 2006, a deceleration in advertising revenues was expected. High inflation rates and economic uncertainty throughout 2022 impacted marketing budgets. However, overall advertising revenues still increased YoY – showcasing the resilience of the U.S. internet advertising industry.

Three year (2020 – 2022) internet advertising revenue trend (\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022



2022 Highlights



The strength of the U.S. advertising industry is shown by strong YoY growth, despite economic uncertainty

Digital Advertising Revenue and Growth Rate

- Between 2021 and 2022 internet advertising revenues grew 10.8% year-over year (YoY) totalling \$209.7 billion. After seeing exponential growth coming out of the pandemic, a deceleration in advertising revenues was expected. Overall revenues increased by \$20.4 billion vs. 2021 despite high inflation rates and economic uncertainty throughout 2022, showcasing the resilience of the U.S. internet advertising industry.
- Quarter-over-quarter (QoQ) growth varied across 2022. Q1 saw the highest growth of 21.1% followed by Q2 at 11.8%, resulting in ad revenues for the first half of the year surpassing \$100 billion for the first time.
- However, within the second half of the year the initial slow down of the economy and high interest rates took their toll on many companies' overall revenue, consequently impacting growth in advertising revenue in Q3 (8.4%) and Q4 (4.4%).
- Programmatic advertising continues to grow with revenues increasing by \$10.4 billion in 2022 to an impressive \$109.4 billion, an increase of 10.5% YoY. Remaining non-search revenues have also grown substantially, increasing their share from 10.8% in 2021 to 12.7% in 2022.
- Search's revenues increased by 7.8% YoY, however its overall market share continues to decrease (a reduction of 1.2 percentage points since 2021) with digital audio and digital video growing at a faster rate.



Mobile revenues continue to grow

Mobile

- Mobile advertising revenues continue to strengthen with 14.1% YoY growth and ad revenues reaching a record high of \$154.1 billion.
- Mobile's strong performance in 2022 has increased the device's market share to 73.5% of total internet ad revenues, up 2.2 percentage points from 2021, the largest increase seen in the last three years.
- The continued evolution and expansion of digital environments, the increase in consumption of digital audio formats such as podcasts, plus the continued rollout of 5G and its beneficial impact on VR and AR advertising capabilities, are likely to continue to positively impact mobile ad revenues in 2023.

2022 Highlights (continued)



Growth of social media advertising revenues has slowed in 2022

Social media

- Social media revenues saw a slow down in growth compared with previous years. First half revenues of 2022 saw the majority of growth with an increase of \$1.8 billion compared with the same period in 2021, while second half revenues plateaued somewhat at \$31.4 billion, a growth of \$0.3 billion.
- First half vs. second half trends reflect the pattern seen across the U.S. advertising industry as a whole in 2022 (i.e. smaller growth in the second half of the year), as revenues were heavily impacted by economic uncertainty which resulted in many social media companies laying off staff. Additionally, the impact of Apple's App Tracking Transparency (ATT) feature is likely to affect social media companies long term and it may take time for revenues to recover.



Retail media networks grew rapidly in 2022

Retail media

- 2022 saw rapid growth among big players in the retail media advertising space who are increasingly challenging legacy digital publishers and platforms for market share.
- We estimate that retail media ad network revenues totalled \$37.5 billion in 2022, with two of the largest retail media ad networks making up 45% of the market (based on industry estimates) and the longtail making up the remainder.
- We expect to see advertising budgets in 2023 continue to migrate to retail media networks as they offer advertisers access to first-party data for personalization and measurement in closed-loop environments.

State of the Industry: 2023 and beyond

2022 saw continued growth in digital advertising in the US, and demonstrated the significant economic power of this industry to the overall health of the economy. Looking ahead, regulatory uncertainty and continued economic challenges will likely threaten industry profit margins and reduce the rate of economic contributions. As user privacy concerns continue to rise and new state-level regulations are being introduced, it's becoming increasingly evident that the industry needs to adapt and evolve beyond traditional methods.

With the industry shift towards privacy-by-design advertising practices, we're witnessing an increase in signal loss and a growing need for alternative methods to target audiences with fewer identifiable data points. This has paved the way for new players in the digital advertising ecosystem such as retail media networks (RMNs), the rise of data clean rooms, the evolution of Connected TV (CTV), and a revisiting of the power of contextual targeting.

It is important to note that this shift towards privacy-preserving advertising practices is not just a temporary trend, but a permanent change. It will require media outlets to redefine what it means to be a premium platform, focusing on contextual relevance and measurable engagement.

Below are three key trends industry leaders should focus on in the near future

1. Privacy & Regulation

The importance of privacy in the digital industry can no longer be ignored. Companies must continue to adjust for ongoing state-level privacy regulations, such as those being instituted this year in California, Virginia, Colorado, Connecticut, and Utah, along with protecting the data and privacy of consumers. Privacy-driven adjustments have become a catalyst for innovation in the industry, leading to the development of novel solutions that balance data-driven advertising with user privacy.

While walled gardens have been present in advertising for some time, the recent focus on privacy in advertising has led to an increase in their utilization, where companies will be required to obtain explicit consumer consent to leverage their data for ad targeting and measurement. This trend presents challenges for marketers looking to reach their target audience, highlighting the need for more innovative privacy-preserving technology solutions such as data clean rooms (DCRs), contextual targeting, cohort audiences, and seller-defined audiences. These solutions will allow advertisers to activate and measure audiences without using identifiers, minimize fingerprinting and data stitching of audience data.

State of the Industry: 2023 and beyond (continued)

2. Evolving Channels

The advertising industry is witnessing a shift towards solutions that can leverage first-party data. This has resulted in the emergence of Connected TV (CTV) and retail media networks (RMNs) providers since these channels provide advertisers with a way to reach their desired audience with relevant ads at scale.

The rapid growth of CTV is creating opportunities for advertisers to reach audiences in innovative and engaging ways, as more and more consumers move away from traditional TV towards streaming platforms access via the internet. Companies that have invested in solutions that enable privacy-preserving advertising, as well as those that prioritize CTV interoperability and unifying identity structures, are well-positioned to capture additional market share and achieve outsized growth.

Unifying identity structures that allow more efficient and accurate targeting of audiences across different channels are becoming increasingly important, and those that have invested in CTV interoperability will have a competitive advantage.

RMNs have risen in popularity as a result of the loss of tracking in walled gardens such as social media. They offer closed-loop systems and first-party data, allowing advertisers to track customer behavior and tailor their campaigns accordingly. This solution has become a popular advertising strategy for retailers, providing a new way to monetize their website traffic and reach consumers.

Demand-side platforms (DSPs) and exchanges are also evolving to connect inventory and impressions on the open web in privacy-preserving ways. This means that DSPs and exchanges are developing solutions that make previously unaddressable inventory, such as contextual targeting, addressable by using first-party data, other privacy-preserving solutions, and/or securing more private marketplace deals.

Programmatic Preferred exchanges are becoming increasingly valuable as they offer more targeted and efficient advertising solutions. These exchanges use real-time bidding to match advertisers with inventory in a privacy-preserving way, allowing them to reach their desired audience with more precision such as leveraging IAB Tech Lab's contextual and audience taxonomy to create seller-defined audiences.

E-commerce and media companies are also working hand-in-hand to develop new ways to target and measure the effectiveness of advertising. This includes shoppable ads, affiliate marketing, and direct-to-consumer advertising. These integrations create a more seamless and efficient advertising ecosystem, where advertisers can measure the effectiveness of their ad campaigns and optimize their targeting strategies.

3. Redefining “Premium”

Evolving user viewership habits suggest that what consumers consider to be “premium” is changing. While the historic definition included high “Hollywood production” values and long-form content, consumer preferences are shifting and so are their viewing behaviors. Consumers are now spending more time with creator content than with studio-produced video content¹, and even on the TV screen creator-driven content now represents over 50% of ad-supported streaming watch time on CTVs². With the rise of user-generated channels and their endless variety of niche media available on-demand, viewer time and attention is turning to content that can match specific interests – regardless of the production value, format, or screen. The notion of “premium” content is being redefined, and now more than ever is in the eyes of the beholder.

Therefore, what's considered quality advertising is also being redefined, and so is the quantification of its value. Advertisers are increasingly looking for ways to measure how an ad engages and captures viewer attention. This focus on attention, combined with increased signal loss, has advertisers reevaluating how to gauge success and determine what's “premium” as well. One of the most valuable components of premium digital content for advertisers will increasingly be media that offers the ability to be personalized and measurable – particularly when first-party data can be used to deliver effective and relevant advertising to specific audiences.

As the advertising industry adapts to continuing shifts in viewing behavior and privacy-centric practices, it will be up to media companies to develop their content under this new “premium” construct. This will enable them to demonstrate to marketers how they can engage audiences and deliver business outcomes with precision, efficiency, and efficacy. Media companies who produce content with this premium-first approach will set themselves up for increased ad revenue generation moving forward.

¹ Consumer Technology Association (June 2022.) *The Creator Economy: Cashing-in with Technology*

² Nielsen Streaming Platform Ratings (October 1-31, 2021) *Total Viewing Minutes of P18+ in TV streaming meter panel; Custom definition of AVOD services consisting of Pluto, Tubi, Peacock, Roku Channel, Hulu; Live+7*

Full year trends

2



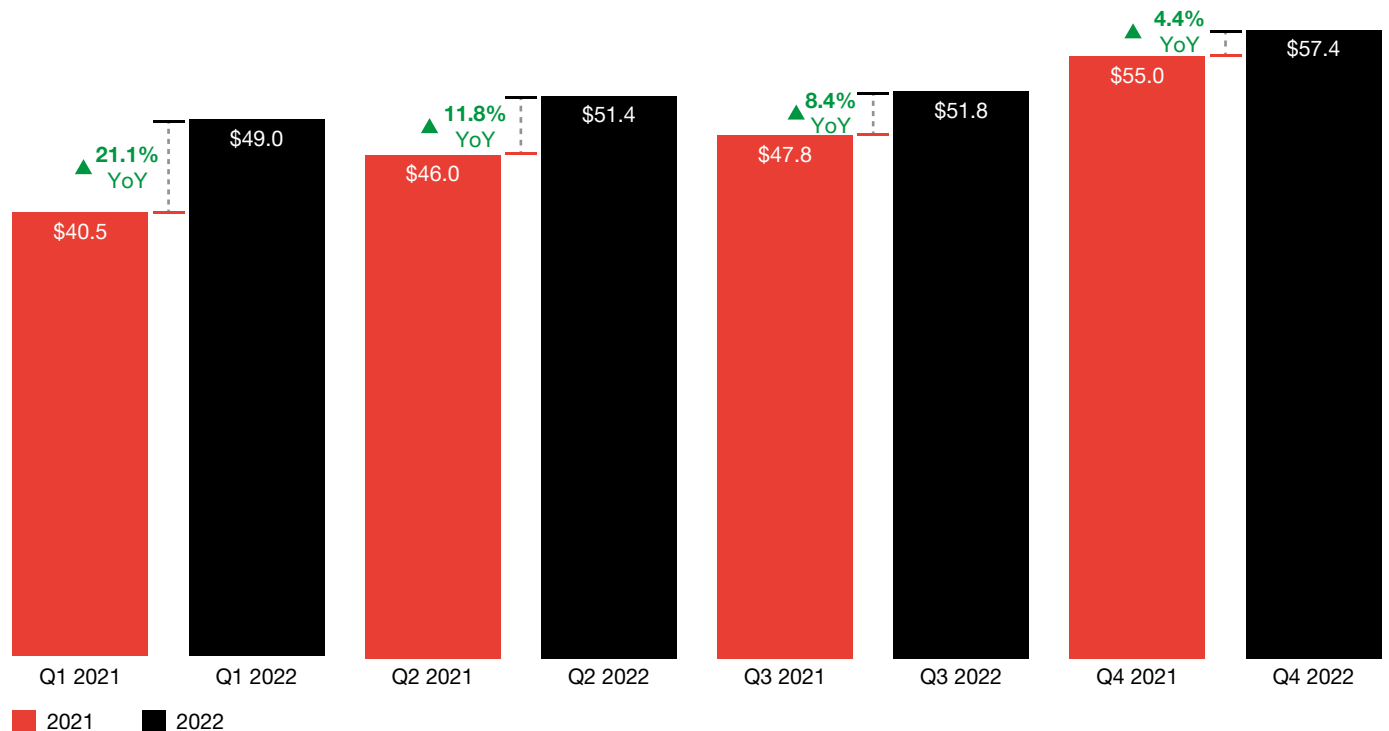
Quarterly growth

Positive overall growth despite a gradual slowdown quarter-over-quarter

Off the back of an impressive 2021, Q1 saw the highest growth rate of 21.1% from the year prior, with ad revenues for this quarter increasing to \$49.0 billion from \$40.5 billion. However, as the year progressed, the initial slow down of the economy and higher interest rates took their toll on many companies' overall revenue. This consequently impacted advertising revenues in the second half of the year, with Q4 of 2022 experiencing the lowest quarter-over-quarter (QoQ) growth rate of 4.4%. In addition to the macroeconomic impacts, Apple's App Tracking Transparency (ATT) feature was embedded in the industry during the entirety of the year, which has been reported to have a notable negative impact on the revenues of many players in the market¹, and likely to have been a contributing factor to the decline in growth rate.

For each quarter of 2022 there has been positive ad revenue growth, with Q1 seeing the strongest growth of 21.1%.

2021 vs. 2022 quarterly internet advertising revenues (\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022

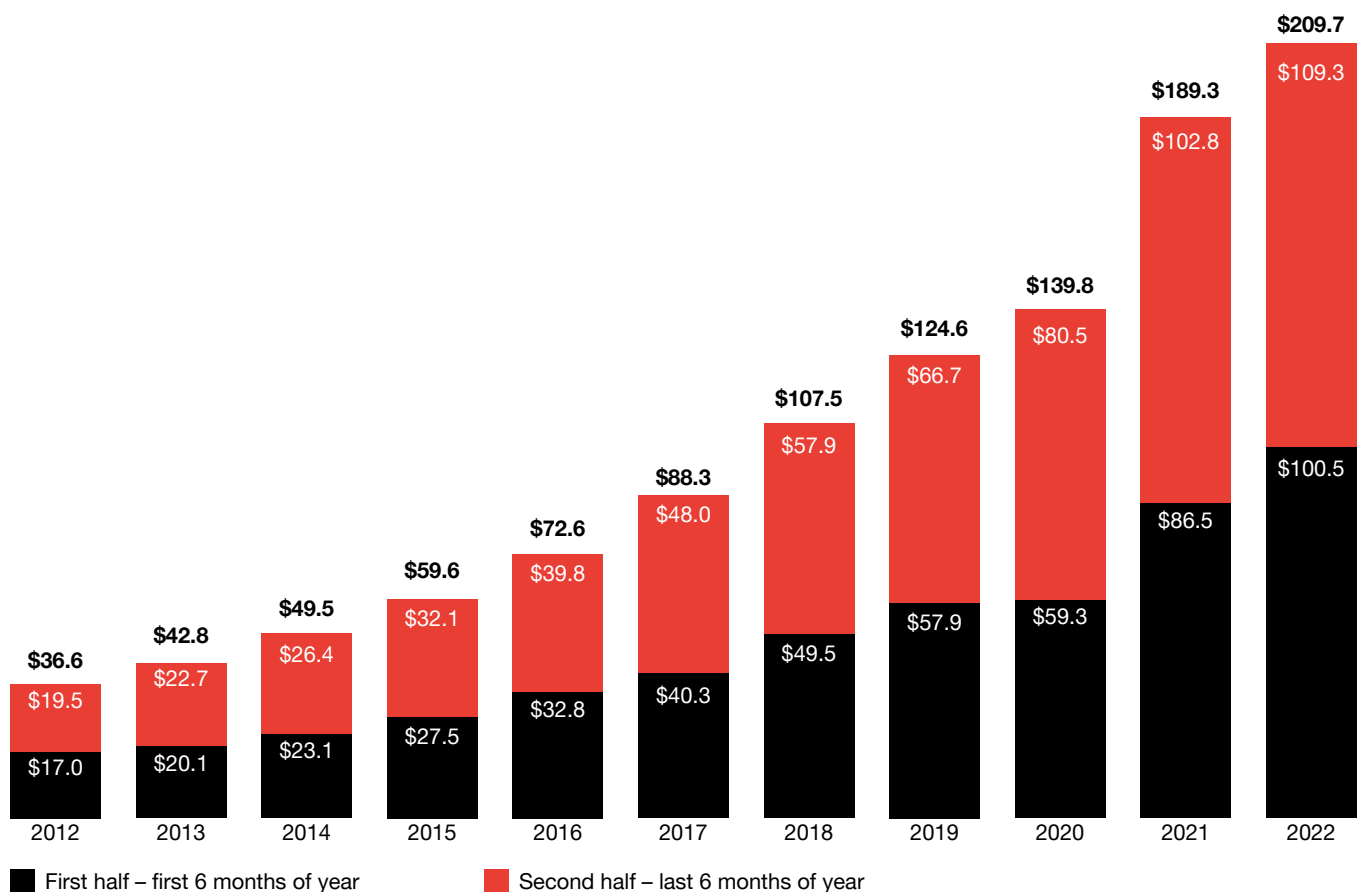
¹ Leswing, K. (February 2022.) Facebook says Apple iOS privacy change will result in \$10 billion revenue hit this year. CNBC

Second half vs. first half revenues

First half digital ad performance surpasses \$100 billion for the first time

The first six months of 2022 saw U.S. ad revenues surpassing \$100 billion for the first time. This represents a 16% increase on 2021's first half performance. Q3 and Q4 continue to account for a higher proportion of revenues but not to the extent seen in previous years. In fact, the second half of 2022 experienced slower growth YoY versus the first half of 2022, with ad revenues increasing by 6% to \$109.3 billion, the moderate growth driven by a slowdown in the U.S. economy.

Historical revenue mix, first half vs. second half (2012 – 2022) (\$ billions)



Note: First and second halves may not add up to total due to rounding

Source: IAB / PwC Internet Ad Revenue Report, FY 2022

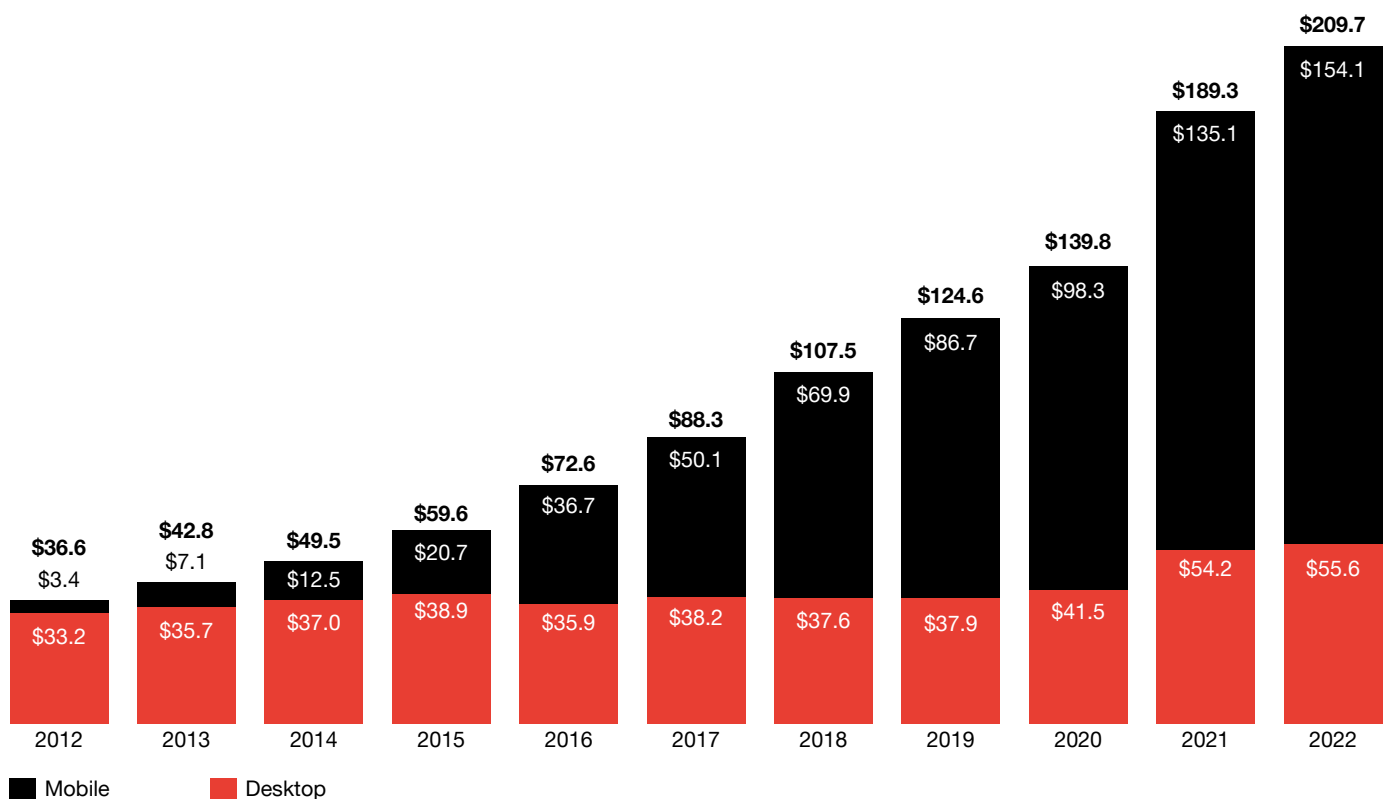
Desktop vs. mobile revenues

Growth remains strong for mobile ad revenues

After record levels of growth in ad revenues for both mobile and desktop in 2021, 2022 saw revenue growth for desktop return to levels seen pre-2021 with a 2.6% YoY growth. Mobile ad revenues continued to strengthen with 14.1% YoY growth, with revenues reaching a record high of \$154.1 billion. Mobile's strong performance in 2022 has increased the format's market share to 73.5% of total internet ad revenues, up 2.2 percentage points from 2021 – the largest increase seen in the last three years. Mobile's increase in market share is likely to be driven by everyday work and leisure life becoming increasingly digital and the evolution of digital environments, such as the continued rollout of 5G or the integration of shopping into social media apps¹.

Total internet advertising revenues have seen a growth rate over the last 10 years of 19.1%, similar to the 19.6% growth measured between 2011 and 2021. Mobile's growth rate continues to decline with growth now sitting at 46.4% between 2012-2022 versus 55.8% between 2011-2021. Desktop's growth rate over the last 10 years also fell to 5.3% after seeing a gradual increase YoY for the last three time periods (6.1% 2011-2021; 5.0% 2010-2022; 4.5% 2009-2019).

Desktop vs. mobile internet ad revenues (2012 – 2022) (\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022

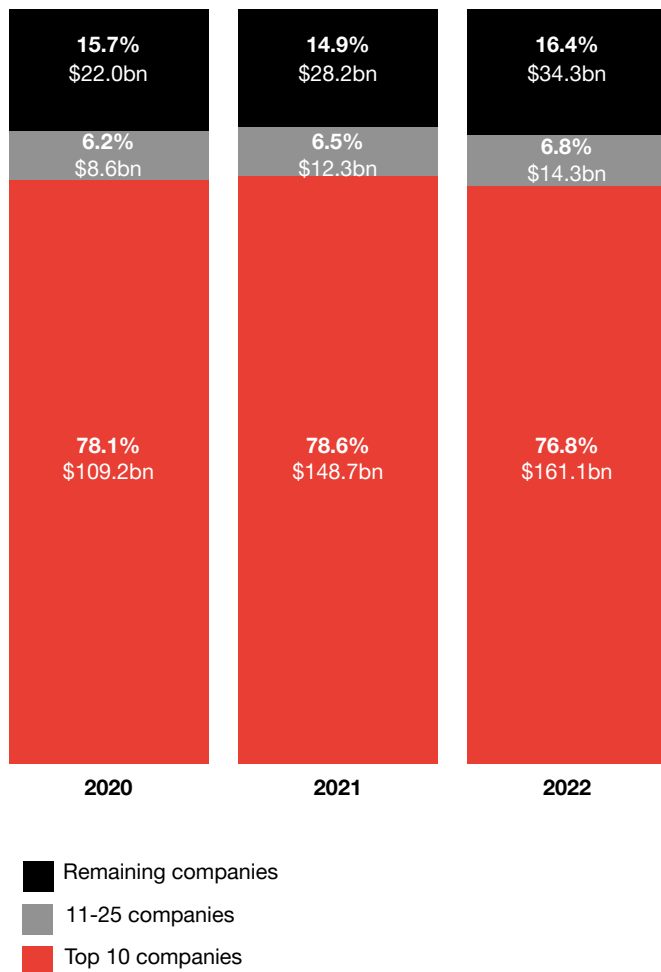
¹ PwC (February 2023.) *Consumers seek frictionless experiences in a world of disruptions*, PwC Global Consumer Insights Pulse Survey

Revenue concentration

Market share of the top 10 companies has declined slightly

2022 saw a decrease of 1.8 percentage points in the share of ad revenue among the top 10 companies for the first time since 2016. This follows the deceleration of their share of growth between 2020 and 2021 (where the top 10 companies share increased by just 0.5 percentage points vs. 1.5 percentage point increase between 2019 and 2020) and further emphasizes a growing democratization of advertising revenue across the mid-tier and long-tail publishers.

Three year (2020 – 2022) internet advertising revenue concentration



Note: Totals may not equal 100% due to rounding

Source: IAB / PwC Internet Ad Revenue Report, FY 2022

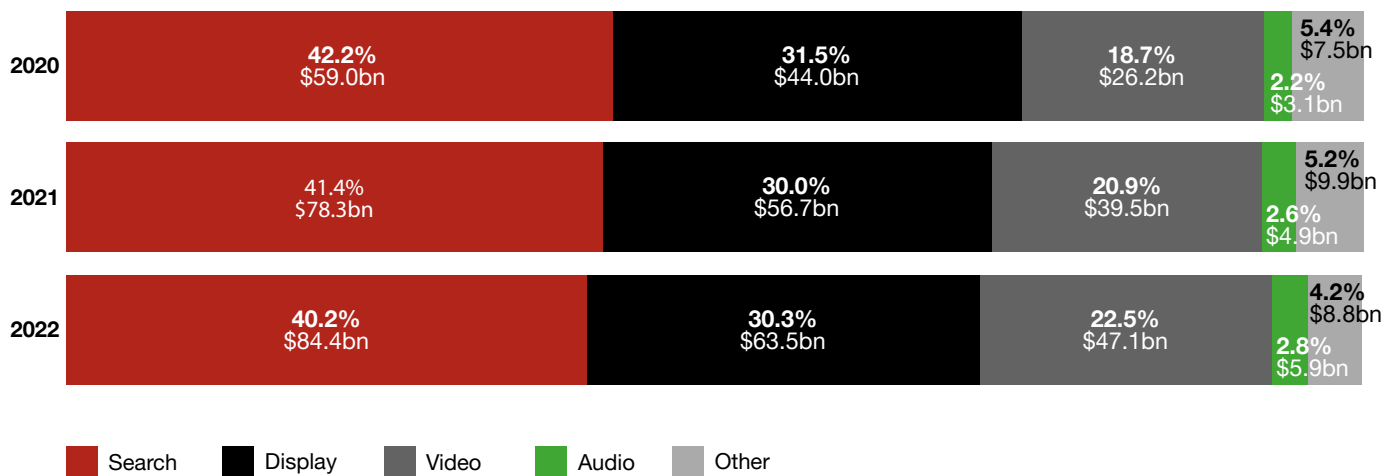
Overall advertising revenues for the top 10 companies now exceed \$160 billion.



2022 results, by format

While search maintains the largest revenue share, digital video continues to show the strongest growth in terms of dollars

Three year (2020 – 2022) advertising format by share and revenue (\$ billions)



Digital video increased its market share by 1.6 percentage points YoY to 22.5% for 2022.



Search

Search secured a record \$84.4 billion in revenues in 2022 making up 40.2% of total internet ad revenues. Although search revenues increased by 7.8% YoY, search’s overall market share continues to decrease (a reduction of 1.2 percentage points since 2021) with digital video and display steadily increasing their market penetration. Innovation of AI programs such as ChatGPT are also changing the utility of search, with Microsoft/Bing and Alphabet/Google investing significant resources in this area.



Display*

\$63.5 billion totaled revenues in 2022, representing a strong increase of 12.0% YoY. Display holds a 30.3% share of total internet ad revenues in 2022.



Digital Video

In 2022, revenues totalled \$47.1 billion, the largest increase in terms of dollars (\$7.6 billion) by format for the year (19.3%).



Digital Audio

Digital audio formats saw a 20.9% YoY growth, with ad revenues totalling \$5.9 billion in 2022.



Other**

\$8.8 billion in revenues with a 4.2% share of total internet ad revenues in 2022.

Source: IAB / PwC Internet Ad Revenue Report, FY 2022

*Display includes Banner, Rich Media, and Sponsorships

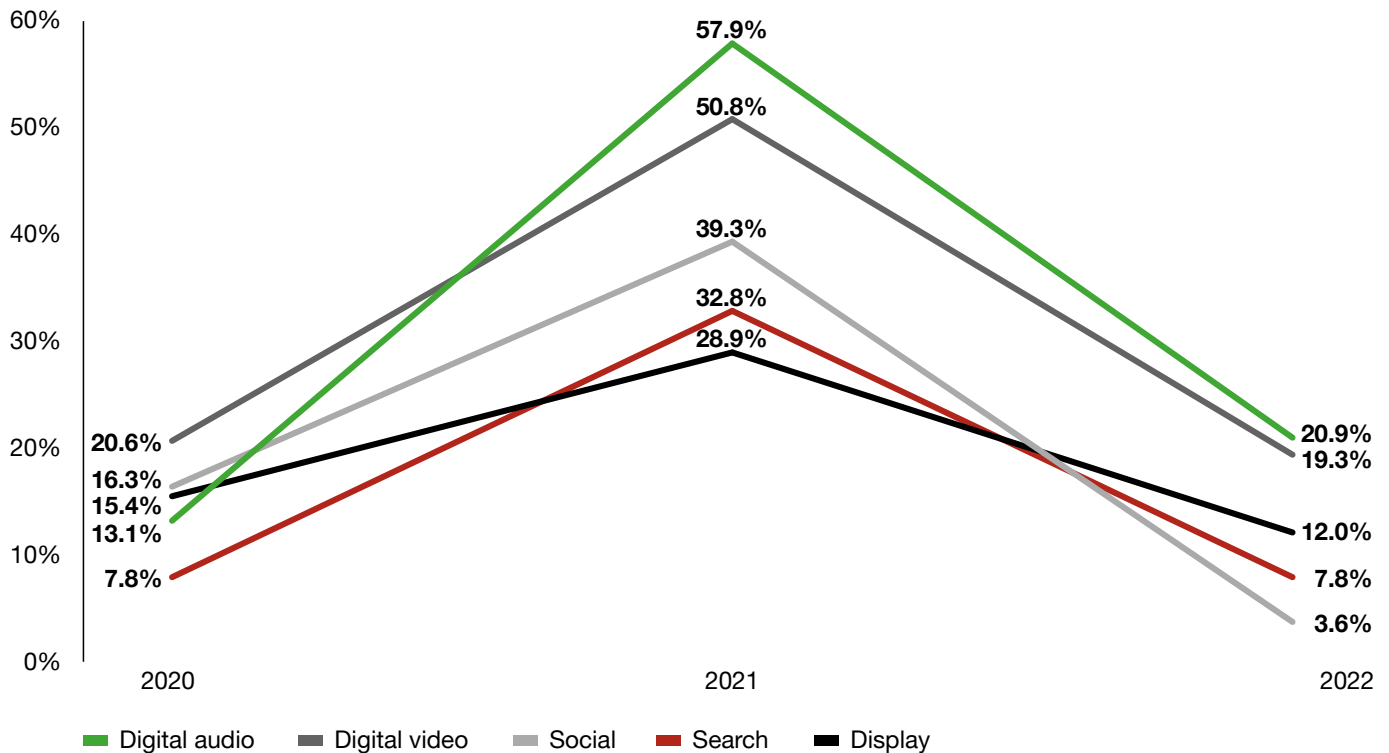
**Other includes Classified and Directories and Lead Generation

Growth by advertising format

Growth rates have returned to pre-2021 levels, with digital audio and digital video formats seeing the strongest performance

After record growth in 2021, advertising format growth rates have returned to levels seen previously. Nevertheless, streaming media (digital audio and digital video) continue to outpace other formats in comparative growth. Conversely, social media formats which were growing strongly in 2021, have seen the slowest growth in 2022 at 3.6%.

Growth by advertising format (2020 – 2022)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022

Note: Totals may not equal 100% due to rounding

Programmatic

Programmatic advertising continues to grow

Programmatic advertising revenue increased by \$10.4 billion over the last year to a total of \$109.4 billion, an increase of 10.5% YoY. Remaining non-search revenues have also grown and increased their share from 10.8% in 2021 to 12.7% in 2022.

Programmatic (excluding search), full-year results (2021 – 2022)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022

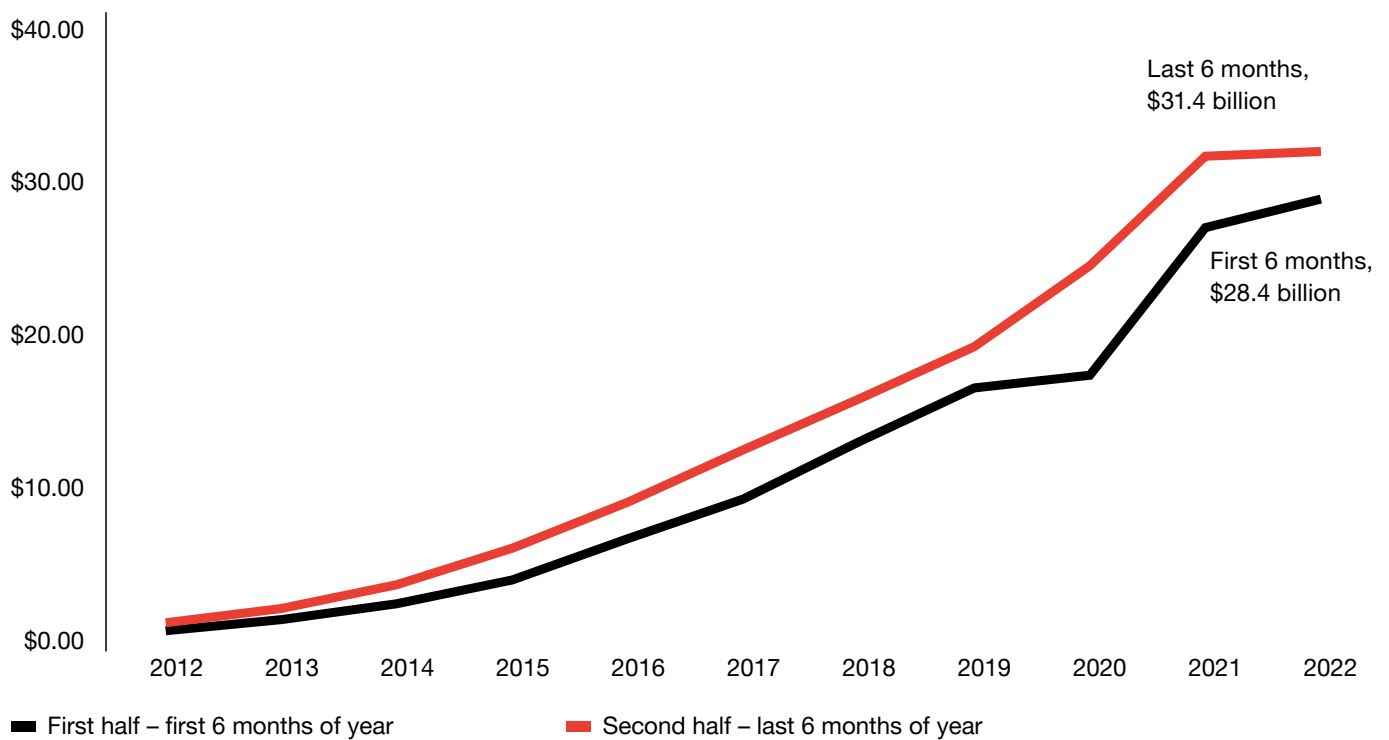


Social media

Social media sees a slow down in growth compared with previous years

Social media advertising revenues totaled \$59.7 billion in 2022, an increase of \$2.0 billion since 2021 and a growth of 3.6%. While still positive, this is the smallest level of growth seen in the last 10 years. First half revenues of 2022 saw the majority of growth with an increase of \$1.8 billion compared with the same period in 2021. While second half revenues, impacted by Apple's ATT feature, plateaued at \$31.4 billion, a growth of \$0.3 billion.

Social media advertising revenue, full-year results (2012 – 2022) (\$ billions)



Source: IAB / PwC Internet Ad Revenue Report, FY 2022

Note: First and second halves may not add up to total due to rounding

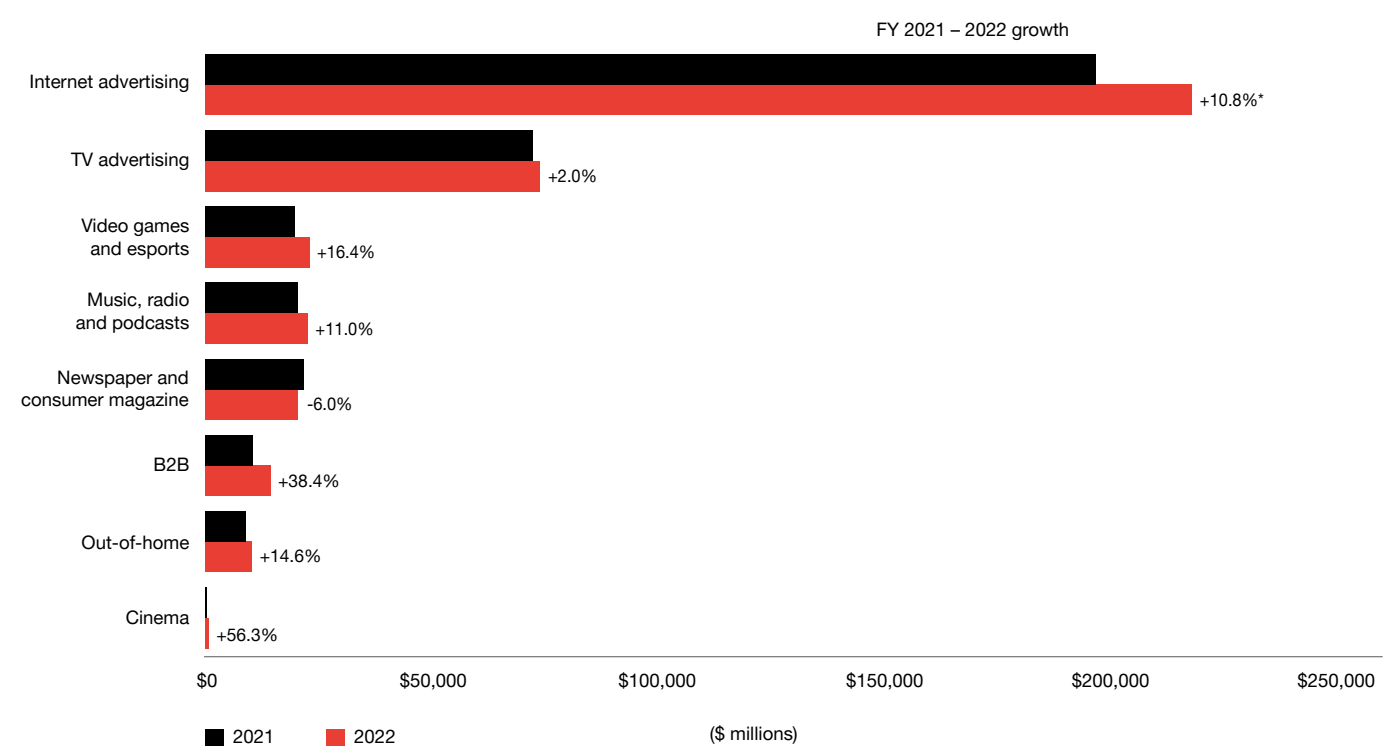
Advertising revenues and growth, by media (digital and non-digital media)

Positive advertising revenue growth across the majority of media types, despite the economic challenges faced in 2021 indicates a strong level of resilience within the industry

The positive rebound in media advertising seen in 2021 appears to be continuing into 2022 with growth seen across the majority of media types. Despite the economic challenges faced in 2022, the positive growth indicates the resilience of these media types, with Cinema, and B2B revenues growing

at impressive rates of 56.3% and 38.4% respectively. On the other hand, and perhaps unsurprisingly, revenues from Newspaper and magazines have seen a drop compared with 2021 figures with a decline of 6.0%.

U.S. Advertising revenues and growth, by media (2021 vs. 2022 growth) (\$ millions)



*Source: Internet advertising data from IAB / PwC Internet Ad Revenue Report, FY 2022

Source: All other data points from PwC Entertainment and Media Outlook 2022-2026

Note: Definitions for the above media types can be found in the appendix

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, PwC Research, 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

Audio (Podcast, Streaming Music, Streaming Radio)	<p>Advertising that is served within an online audio environment, e.g. through a streaming audio platform or website</p>
Classifieds & Directories	<p>Fees paid by advertisers to 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).</p>
Display (Banners / Rich Media)	<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 full motion video.</p> <p>Ad Types included Horizontal, Vertical, Tiles, Full Page Portrait, Full Page Landscape and Feature Phone Sizes.</p> <p>Interactive features that engage the user and initiate new content experiences. Interactive features could be animation or elements that trigger ad expansion or 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.</p> <p>Video commercials that appear in video players are considered Digital Video Ads, not Rich Media.</p> <p>“Interstitials” are defined as between-the-page ad units, also known as “interstitial” ads, between-the-page ad units 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:</p> <p>Splash screens – a preliminary page that precedes the regular home page of a website that 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.</p> <p>Superstitials – ads that are distinct from interstitials because of the much higher ad quality, and that they play instantly (ads are fully downloaded before they are displayed).</p> <p>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.</p> <p>Overlay – An ad unit that displays over the webpage content briefly when initiated.</p> <p>Pop-up ads and pop-under ads – an advertisement that appears in a separate window which automatically loads over an existing content window, without an associated banner.</p>
Gaming (In-App, PC & Console)	<p>Advertising that is either static (hardcoded) or dynamic (served programmatically in real-time) within the active gameplay environment or in virtual gaming worlds.</p>

Definitions of advertising formats (continued)

Lead Generation	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.
Native / Branded Content	Unlike standard ads, native ads typically follow the natural design, location and ad behavior of the environment in which they are placed. The most commonly used native ads are In-Feed/In-Content Native Ads, Content Recommendation Ads and Branded/Native Content (the paid content itself) and are channel-agnostic e.g. would include gaming.
Retail Media Network ads (Retail Media / Shopper)	Retail Media Network ads that allow a retailer to promote/ sponsor their own white-label products and/ or the products they sell from their vendors directly on their own eCommerce site or on other sites.
Search (SEM)	<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> <p>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.</p> <p>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.</p> <p>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).</p> <p>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).</p>
Social	Social media ads are ads that reach targeted audiences through social media platforms, messaging apps, and social media news feeds.
Video	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) which contain video are categorized as rich media ads.

Definitions of advertising media from PwC's Entertainment and Media Outlook

Internet advertising	<p>This segment comprises spending by advertisers either through a wired Internet connection or via mobile devices. The types of advertising (wired or mobile) are classified primarily by format rather than transport mechanism or device. This revenue is digital, and from advertiser spending.</p> <p>Total Internet advertising comprises online television, newspaper, consumer magazine, trade magazine, directory advertising and online radio (for North America only), which are also all included in their respective segments. The wired sub-segments consider paid search, display and classified formats. Display is broken out further between video and other display.</p>
TV advertising	<p>This segment comprises all TV advertising revenue, including broadcast and online. Broadcast television covers all advertising revenues generated by free-to-air networks (terrestrial) and pay-TV operators (multichannel). Online TV advertising consists of in-stream adverts and reflects revenues from pre-roll, mid-roll and post-roll ads around TV content distributed by broadcaster-owned websites.</p>
Music, radio and podcasts	<p>This segment comprises consumer spend on music, including both physical and digital recorded music and live music played at concerts, as well as revenue from sponsorship of live music, but does not include revenue from merchandise or concessions at live music events. It also includes revenue from consumer spend on radio license fees (where applicable) and all advertising spend on radio stations and radio networks. Finally, it includes revenue from podcast advertising, podcasts being defined as a piece of principally spoken-word recorded audio content delivered over the internet, excluding audiobooks, that can be either downloaded or streamed. This segment includes both digital and non-digital revenue, and revenue from both consumer and advertising spending.</p>
Cinema	<p>This segment comprises cinema revenue (including box office and advertising). This revenue is non-digital, and includes both consumer and advertising spending.</p>
Newspaper and consumer magazines	<p>This segment comprises revenue from both circulation (consumer spend) and advertising in newspapers and consumer magazines. It considers both physical print editions and digital editions. It includes all daily newspapers, including weekend editions and free dailies. Weekly newspapers are included in markets where data is available. This revenue is both digital and non-digital, and is from both consumer and advertising spending.</p>
OOH	<p>The out-of-home (OOH) advertising market consists of advertiser spending on out-of-home media. OOH comprises total advertiser spending on all formats of out-of-home media, and is split between physical and digital. Advertising spend is tracked as net of agency commissions, production costs and discounts.</p> <p>Traditional physical out-of-home media includes billboards, street furniture (bus shelters, kiosks) transit displays (bus sides, taxi toppers), sports arena displays, and captive ad networks (in such venues as elevators).</p> <p>Digital OOH includes any out-of-home advertising media that is Internet-connected (e.g. smart billboards).</p>
Business-to-business (B2B)	<p>This segment covers business-to-business media, comprising business information, trade magazines, professional books and trade shows.</p>
Video games and esports	<p>This segment comprises consumer spending on video games software and services (not hardware or devices) across both traditional and social/casual gaming, as well as revenue from advertising via video games. It also includes revenue from consumer and advertiser spend on esports.</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, commercial 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 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.

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%

	Revenue (in mil)	Q/Q growth	Y/Y growth
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%
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%

Historical data findings (continued)

	Revenue (in mil)	Q/Q growth	Y/Y growth
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%

	Revenue (in mil)	Q/Q growth	Y/Y growth
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	-13%	11%
Q2 2020	\$28,350	-8%	-5%
Q3 2020	\$34,925	23%	-12%
Q4 2020	\$45,601	31%	29%
Total 2020	\$139,828		12%
Q1 2021	\$40,507	-11%	31%
Q2 2021	\$45,998	14%	62%
Q3 2021	\$47,814	4%	37%
Q4 2021	\$54,991	15%	21%
Total 2021	\$189,310		35%
Q1 2022	\$49,035	-11%	21%
Q2 2022	\$51,442	5%	12%
Q3 2022	\$51,834	1%	8%
Q4 2022	\$57,416	11%	4%
Total 2022	\$209,728		11%

Source: IAB/ PwC Internet Ad Revenue Report, FY2022

About IAB

The Interactive Advertising Bureau empowers the media and marketing industries to thrive in the digital economy. Its membership comprises more than 700 leading media companies, brands, agencies, 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 a total of 45 IAB organizations, including three regional organizations, to share challenges, develop global solutions, and advance the digital advertising industry worldwide. IABs are located in North America, South America, Africa, Asia Pacific and Europe. Each association is independently owned and operated, functioning under bylaws consonant with local market needs.

Executive Committee

IAB Board President

David Cohen

Chief Executive Officer at IAB

IAB Board Chair

Alysia Borsa

Chief Business Officer and President of Lifestyle at Dotdash Meredith

IAB Board Vice Chair

John Halley

President at Paramount Advertising

Krishan Bhatia

President and Chief Business Officer at NBCUniversal

Gina Garrubbo

President and Chief Executive Officer At National Public Media

Peter Naylor

Vice President Sales, Americas at Netflix

Shenan Reed

Senior Vice President, Head of Media at L'Oréal

Ex Officio

IAB Board Treasurer

John Toohey

Senior Vice President, Finance at Cumulus

Miranda Dimopoulos

Regional Chief Executive Officer at IAB SEA & India

Towney Feehan

Chief Executive Officer at IAB Europe

Stu Ingis

Chairman at Venable LLP

Rich LeFurgy

General Partner at Archer Advisors

David Moore

Chief Executive Officer at BIGtoken

Randall Rothenberg

Limitless Partner at Randall, Ltd

About IAB (continued)

Board of Directors

Sheri Bachstein

Chief Executive Officer at The Weather Company, and GM, IBM Watson Advertising

Debi Chirichella

President at Hearst Magazines

Eric Danetz

Global Head of Revenue at Reuters

Jerry Dischler

Vice President and General Manager Ads at Google

Tom Fochetta

Senior Vice President at Samsung Ads

Rajeev Goel

Co-Founder & Chief Executive Officer at PubMatic

Elizabeth Herbst-Brady

Chief Revenue Officer at Yahoo

Scott Howe

Chief Executive Officer at LiveRamp

Jia Hyun

Vice President, Marketing Solutions at LinkedIn

Norm Johnston

Global Head of Advertising Strategy at News Corp

Luke Kallis

Vice President of Sales, Americas at Snap Inc.

Ajay Kapoor

Global Director, Performance Driven Marketing at General Motors Company

Jim Keller

Head of Digital Advertising Sales & Advanced Advertising at Warner Bros Discovery

Eileen Kiernan

Global Chief Executive Officer at Mediabrands

Craig Kostelic

Chief Business Officer, Global Advertising Solutions at Condé Nast

Alison Levin

Vice President, Ad Revenue and Marketing Solutions at Roku

Helen Lin

Chief Digital Officer at Publicis Media

Kirk McDonald

Chief Executive Officer at GroupM North America

Alan Moss

Vice President, Global Advertising at Amazon Advertising

Nicolle Pangis

Chief Executive Officer at Ampersand

Joy Robins

Chief Revenue Officer at The Washington Post

Doug Rozen

Chief Executive Officer at Americas, dentsu Media

Aaron Sobol

Head of US Media Investment at Unilever

David Spector

Chairman and Co-Founder at ThirdLove

Nada Stirratt

Vice President, North America at Meta

Sarah Travis

President at Roundel

John Trimble

Chief Advertising Revenue Officer at SiriusXM

Lisa Valentino

Executive Vice President, Client Solutions & Addressable Enablement at The Walt Disney Company

Julie Van Ullen

Managing Director, U.S. at Rakuten Advertising

Joe Zawadzki

General Partner at Aperiam

PwC's technology, media and telecommunications practice

The technology, media and telecommunications industries have never been more complex, challenging or important as they are in today's world. From the metaverse to NFTs, 5G to streaming content, artificial intelligence to new semiconductor chips, TMT companies are embedded in the wave of innovation and rapid change affecting our personal and professional lives today. At PwC, we understand the challenges and see the opportunities – addressing change at the convergence of powerful industries is where we thrive. PwC's multi-disciplinary, global TMT industry team of consulting, tax and assurance professionals can help turn innovation into practice and practice into growth.

Our services include helping TMT clients with:

1. Strategic growth
2. Cost optimization
3. ESG
4. Workforce engagement and DEI
5. Cyber resilience
6. Tech enabled transformation (CRM, ERP, cloud, MarTech, AdTech and beyond)
7. Customer experience design and optimization
8. Marketing and sales transformation
9. Risk and regulatory management (compliance, controls, privacy, etc.)
10. Media advisory services and accreditation
11. Tax planning and compliance
12. Mergers, acquisitions, integrations and divestitures

PwC Research

PwC Research is the firm's global center of excellence for bespoke research and insight, working with clients to help them build world-class insight capabilities and solve their business challenges.

Our real-time insight and analytics and unique advisory frameworks help businesses achieve sustained outcomes as they transform in the digital age.

For over 25 years we have been trusted to undertake some of the most prestigious and thought-provoking research in the UK, Europe, the Americas and Asia Pacific. We deliver impactful and visual insight for global clients ranging from Fortune 500 companies to national governments, informing strategy, driving performance improvement and supporting change.

With the unique ability to connect with subject-matter experts across the PwC global network, we can integrate and embed global citizen, customer, market and employee insight at the right time within an organization's decision making.

Our research and insight services include:

- Insight consulting
- Market assessment
- Customer experience
- Product design and brand
- Conduct and culture
- Agile data collection

Contacts



New York

Pam Zucker

Senior Vice President, Chief Strategy Officer
pam@iab.com

New York

Jack Koch

Senior Vice President, Research & Insights
jack@iab.com



Seattle

CJ Bangah

Digital Platform Subsector Leader
christina.j.bangah@pwc.com

Philadelphia

Stephen Krasnow

Senior Manager, Customer Transformation
stephen.krasnow@pwc.com

PwC has exercised reasonable care in the collecting, processing and reporting of this information but has not independently verified, validated, or audited the data to verify the accuracy or completeness of the information. PwC gives no express or implied warranties, including but not limited to any warranties of merchantability or fitness for a particular purpose or use and shall not be liable to any entity or person using this document, or have any liability with respect to this document. This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors



www.iab.com
www.pwc.com/e&m

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PricewaterhouseCoopers LLP, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

© 2023 PwC. All rights reserved. PwC refers to the U.S. member firm or one of its subsidiaries or affiliates, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details. This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

RITM10856700