

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

IAB internet advertising revenue report

2016 full year results



April 2017

*An industry survey
conducted by PwC and
sponsored by
Interactive
Advertising
Bureau (IAB)*

pwc

Table of contents

Background.....	1
Executive summary	2
Year-to-date revenues show strong growth	3
Detailed findings.....	4
Shift from desktop to mobile.....	5
Continued historical quarterly revenue trends	6
Historical revenue mix – First half vs. second half.....	7
Historical data findings	8
Revenue concentration.....	9
Ad format – Fourth quarter 2016 results.....	10
Ad format – Full year 2016 results.....	11
Historical format trends	12
Mobile narrowly surpasses desktop for the first time	13
The gap between desktop video and Mobile video is quickly closing.....	14
Social media advertising revenue.....	15
2016 marks the debut of digital audio advertising as a standalone category.....	16
Industry advertising – Year-over-year comparison.....	17
Revenues by pricing model	18
Historical pricing model trends	19
Appendix.....	20

Any trademarks included are trademarks of their respective owners and are not affiliated with, nor endorsed by, PricewaterhouseCoopers LLP, its subsidiaries or affiliates

Background

About the IAB internet advertising revenue report

Conducted by PwC Advisory Services LLC (“PwC”) on an ongoing basis, with results released quarterly, the “IAB Internet Advertising Revenue Report” was initiated by the Interactive Advertising Bureau (IAB) in 1996. This report utilizes data and information reported directly to PwC, publicly available online corporate data, and information provided by online ad selling companies.

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 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 to this report.

David Silverman
PwC

Executive summary

IAB internet advertising revenue report 2016 full year highlights

Internet advertising revenues (“revenues”) in the United States totaled \$72.5 billion for the full year of 2016, with Q4 2016 accounting for approximately \$21.6 billion and Q3 2016 accounting for approximately \$18.2 billion. Revenues for the full year of 2016 increased 21.8% over 2015.

Key trends underlying Full-Year (FY) 2016 results

Revenues increase 21.8% in FY 2016 — Internet advertising revenues in the United States totaled \$21.6 billion in the fourth quarter of 2016, an increase of 18.9% from the 2016 third-quarter total of \$18.2 billion and an increase of 24.3% from the 2015 fourth-quarter total of \$17.4 billion. 2016 full year internet advertising revenues totaled \$72.5 billion, up 21.8% from the \$59.6 billion reported in 2015.

“Mobile fueled the internet economy in 2016, with advertisers showing their confidence in digital to achieve their marketing goals. This increasing commitment is a reflection of brands’ ongoing marketing shift from ‘mobile-first’ to ‘mobile-only’ in order to keep pace with today’s on-the-go consumers.”

— Randall Rothenberg, President and CEO, IAB

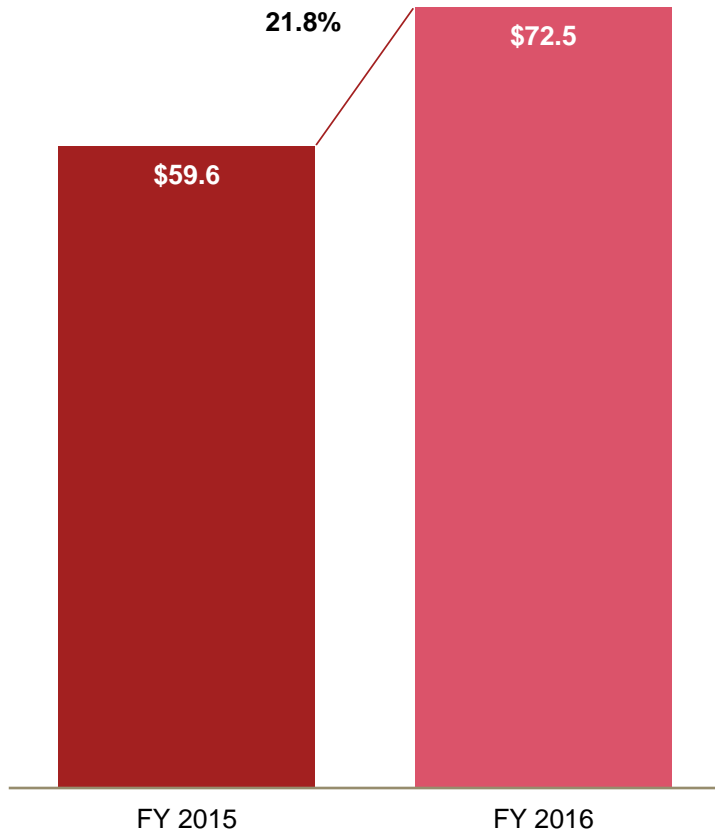
Digital Audio makes its debut — 2016 marks the introduction of digital audio as a standalone category within our survey with \$1.1 billion in advertising revenues.

“The 2016 IAB internet advertising survey has highlighted that digital advertising has leapt off the desktop and unlocked the potential of not only mobile video but audio ad units as well.”

— David Silverman, Partner, PwC

Year-to-date revenues show strong growth

FY 2015 vs. FY 2016 (\$ billions)



Revenues for FY 2016 totaled \$72.5 billion, \$12.9 billion (21.8%) higher than in FY 2015

Source: IAB/PwC Internet Ad Revenue Report, FY 2016

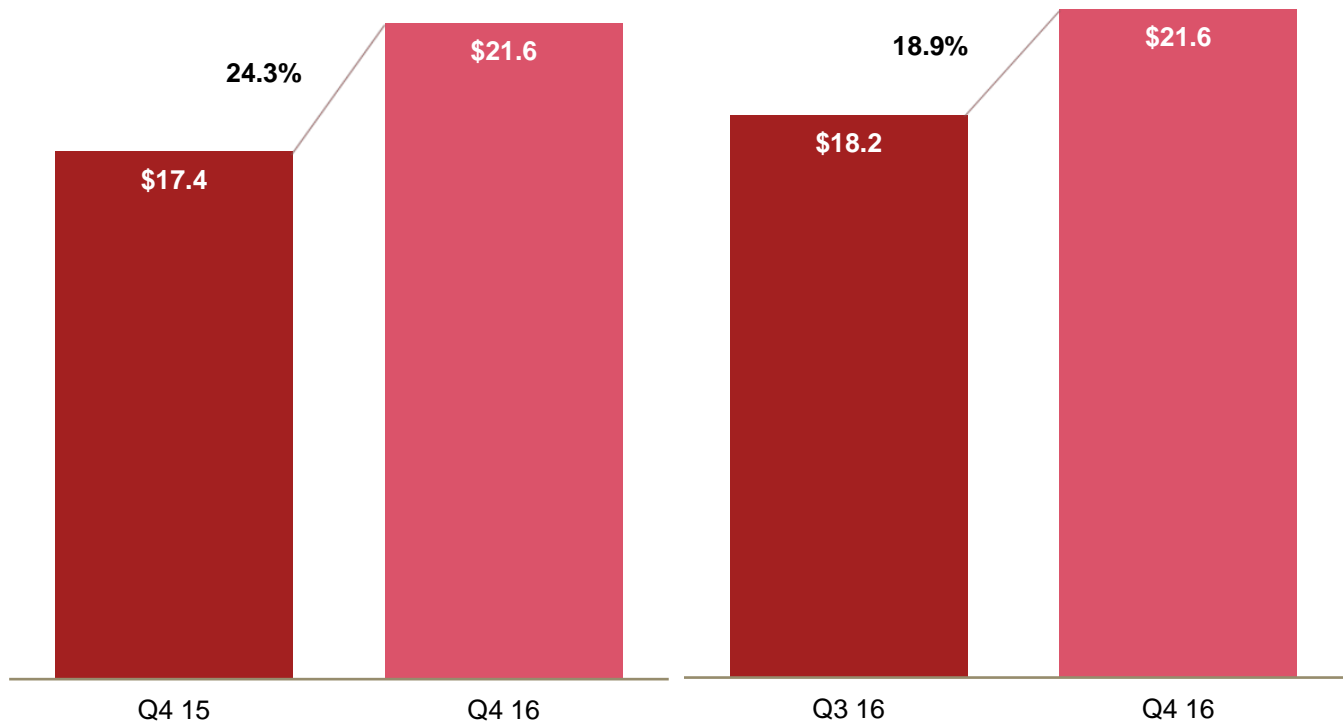
Detailed findings

Revenues totaled \$21.6 billion in Q4 2016

Total 2016 fourth-quarter revenues were \$4.2 billion (24.3%) higher than in the fourth quarter of 2015 and \$3.4 billion (18.9%) higher than in the third quarter of 2016.

Q4 2015 vs. Q4 2016 (\$ billions)

Q3 2016 vs. Q4 2016 (\$ billions)



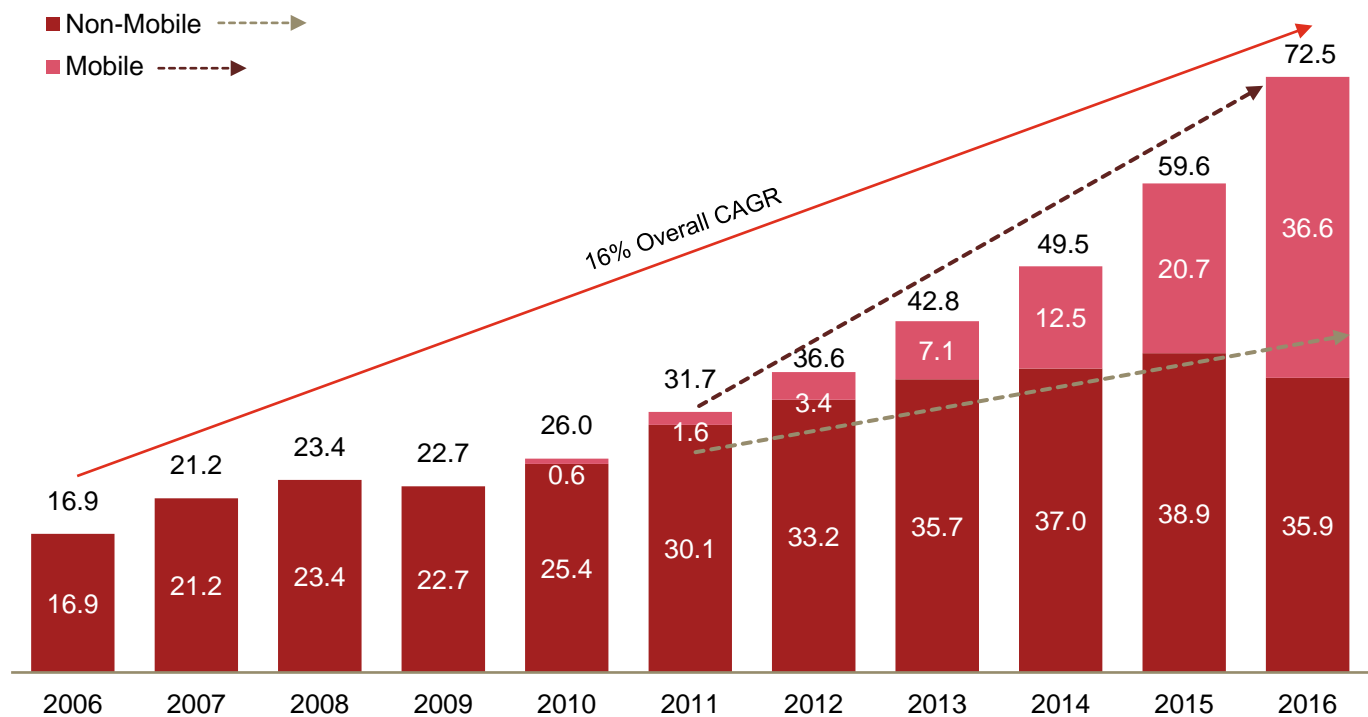
Source: IAB/PwC Internet Ad Revenue Report, FY 2016

Shift from desktop to mobile

Mobile makes up more than 50% of internet advertising revenue for the first time

2016 annual revenues increased on a year-over-year percentage and dollar basis, with Mobile accounting for 50.52% of all revenue. The 5 year CAGR shows that internet advertising growth continues to be fueled by an 87% CAGR in Mobile (compared to 6% growth in non-Mobile revenue over the same period). However, the 5 year CAGR for Mobile decreased from 100% in 2015 and the 5 year CAGR for non-Mobile decreased from 9% in 2015.

The compound annual growth rate (CAGR) over the past ten years for internet advertising of 16% has outpaced U.S. current dollar GDP growth of 3% over that period. However, the CAGR decreased from 17% in 2015, suggesting that internet advertising growth may be slowing.



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

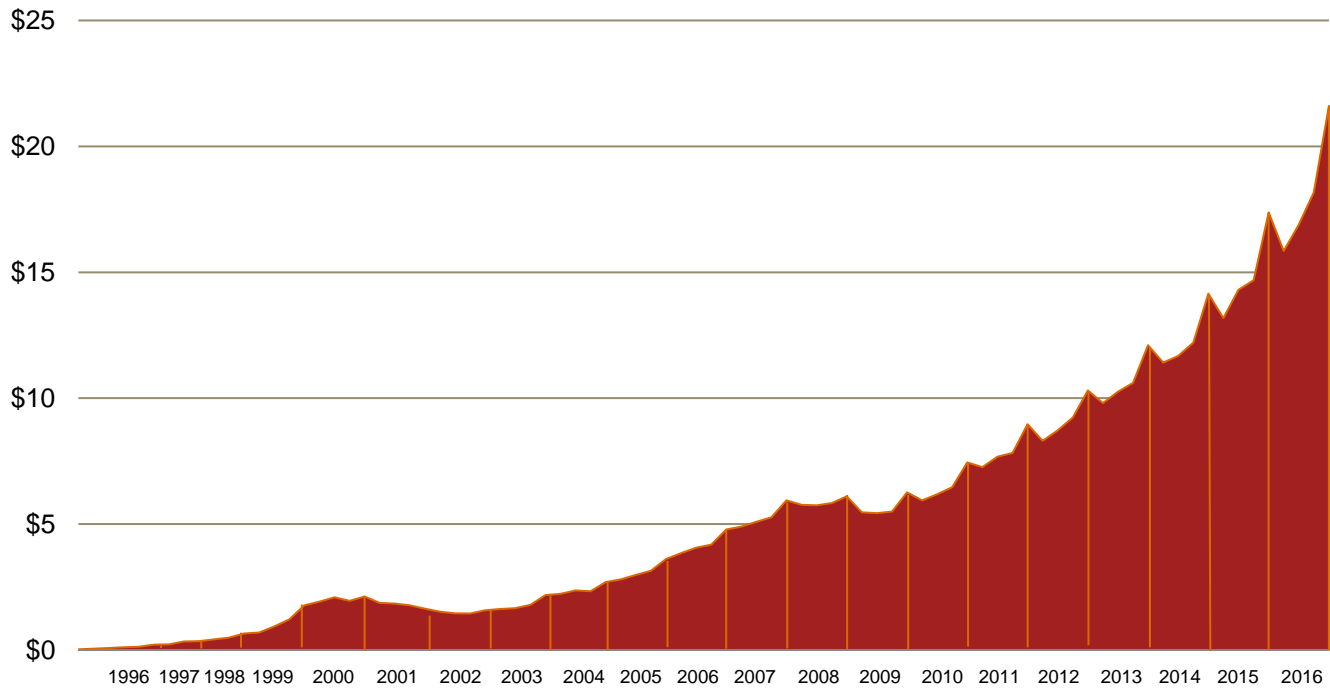
Continued historical quarterly revenue trends

Quarterly growth continued upward trend

From the momentum built in 2010, internet advertising continues to show strong growth. After a recurring seasonal dip in Q1, Q2 2016 revenues continued the upward trend.

Since 2010, a strong seasonal trend has emerged for internet advertising revenues. With each annual cycle, revenue peaks in the fourth quarter, and is followed by a dip in the first quarter before the upward trend starts again in the second quarter.

Quarterly revenue growth trends 1996-2016 (\$ billions)



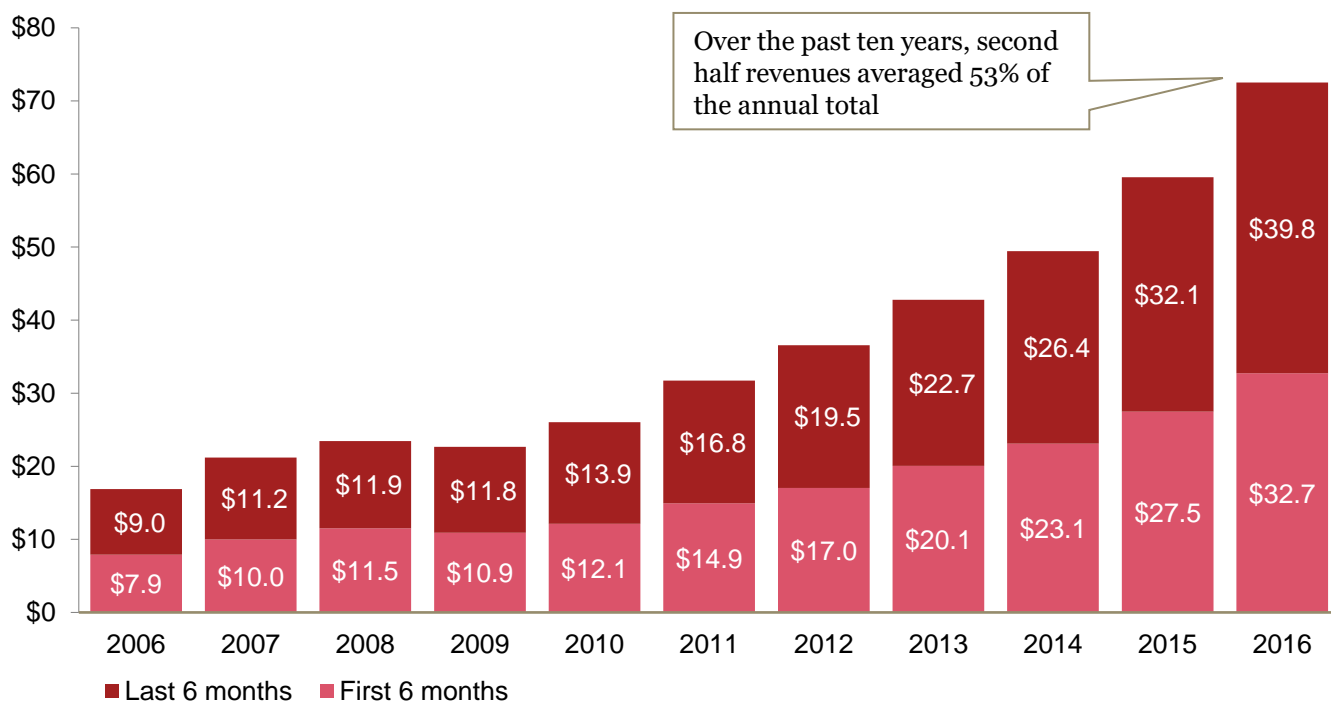
Source: IAB/PwC Internet Ad Revenue Report, FY 2016

Historical revenue mix – First half vs. second half

Second-half revenues reached \$39.8 billion

Second-half revenues totaled \$39.8 billion in 2016, an increase of \$7.7 billion from second-half revenues of 2015, which totaled \$32.1 billion. Second-half revenues in 2016 represented 55% of total revenues in 2016, up from the 54% reported in 2015 and consistent with the broader trend of higher revenues in the second-half of each year. The historically higher proportion of revenues in the second half of the year results from both the continued growth in the industry and from the seasonality of higher ad spend in the fourth quarter.

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



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

Historical data findings

Annual and quarterly revenue growth

	Revenue (in mil)	Q/Q Growth	Y/Y Growth		Revenue (in mil)	Q/Q Growth	Y/Y Growth
Q1 2003	\$1,632	3%	7%	Q1 2010	\$5,942	-5%	9%
Q2 2003	\$1,660	2%	14%	Q2 2010	\$6,185	4%	14%
Q3 2003	\$1,793	8%	24%	Q3 2010	\$6,465	5%	18%
Q4 2003	\$2,182	22%	38%	Q4 2010	\$7,449	15%	19%
Total 2003	\$7,267		21%	Total 2010	\$26,041		15%
Q1 2004	\$2,230	2%	37%	Q1 2011	\$7,264	-2%	22%
Q2 2004	\$2,369	6%	43%	Q2 2011	\$7,678	6%	24%
Q3 2004	\$2,333	-2%	30%	Q3 2011	\$7,824	2%	21%
Q4 2004	\$2,694	15%	24%	Q4 2011	\$8,970	15%	20%
Total 2004	\$9,626		33%	Total 2011	\$31,735		22%
Q1 2005	\$2,802	4%	25%	Q1 2012	\$8,307	-7%	14%
Q2 2005	\$2,985	7%	26%	Q2 2012	\$8,722	5%	14%
Q3 2005	\$3,147	5%	35%	Q3 2012	\$9,236	6%	18%
Q4 2005	\$3,608	15%	34%	Q4 2012	\$10,307	12%	15%
Total 2005	\$12,542		30%	Total 2012	\$36,570		15%
Q1 2006	\$3,848	7%	37%	Q1 2013	\$9,806	-5%	18%
Q2 2006	\$4,061	6%	36%	Q2 2013	\$10,260	5%	18%
Q3 2006	\$4,186	3%	33%	Q3 2013	\$10,609	3%	15%
Q4 2006	\$4,784	14%	33%	Q4 2013	\$12,106	14%	17%
Total 2006	\$16,879		35%	Total 2013	\$42,781		17%
Q1 2007	\$4,899	2%	27%	Q1 2014	\$11,414	-6%	16%
Q2 2007	\$5,094	4%	25%	Q2 2014	\$11,678	2%	14%
Q3 2007	\$5,267	3%	26%	Q3 2014	\$12,207	5%	15%
Q4 2007	\$5,946	13%	24%	Q4 2014	\$14,152	16%	17%
Total 2007	\$21,206		26%	Total 2014	\$49,451		16%
Q1 2008	\$5,765	-3%	18%	Q1 2015	\$13,179	-7%	16%
Q2 2008	\$5,745	0%	13%	Q2 2015	\$14,302	9%	23%
Q3 2008	\$5,838	2%	11%	Q3 2015	\$14,688	3%	20%
Q4 2008	\$6,100	4%	2%	Q4 2015	\$17,382	18%	23%
Total 2008	\$23,448		11%	Total 2015	\$59,550		20%
Q1 2009	\$5,468	-10%	-5%	Q1 2016	\$15,849	-9%	20%
Q2 2009	\$5,432	-1%	-5%	Q2 2016	\$16,889	7%	18%
Q3 2009	\$5,500	1%	-6%	Q3 2016	\$18,175	8%	24%
Q4 2009	\$6,261	14%	3%	Q4 2016	\$21,607	19%	24%
Total 2009	\$22,661		-3%	Total 2016	\$72,521		22%

Source: IAB/PwC Internet Ad Revenue Report, HY 2016

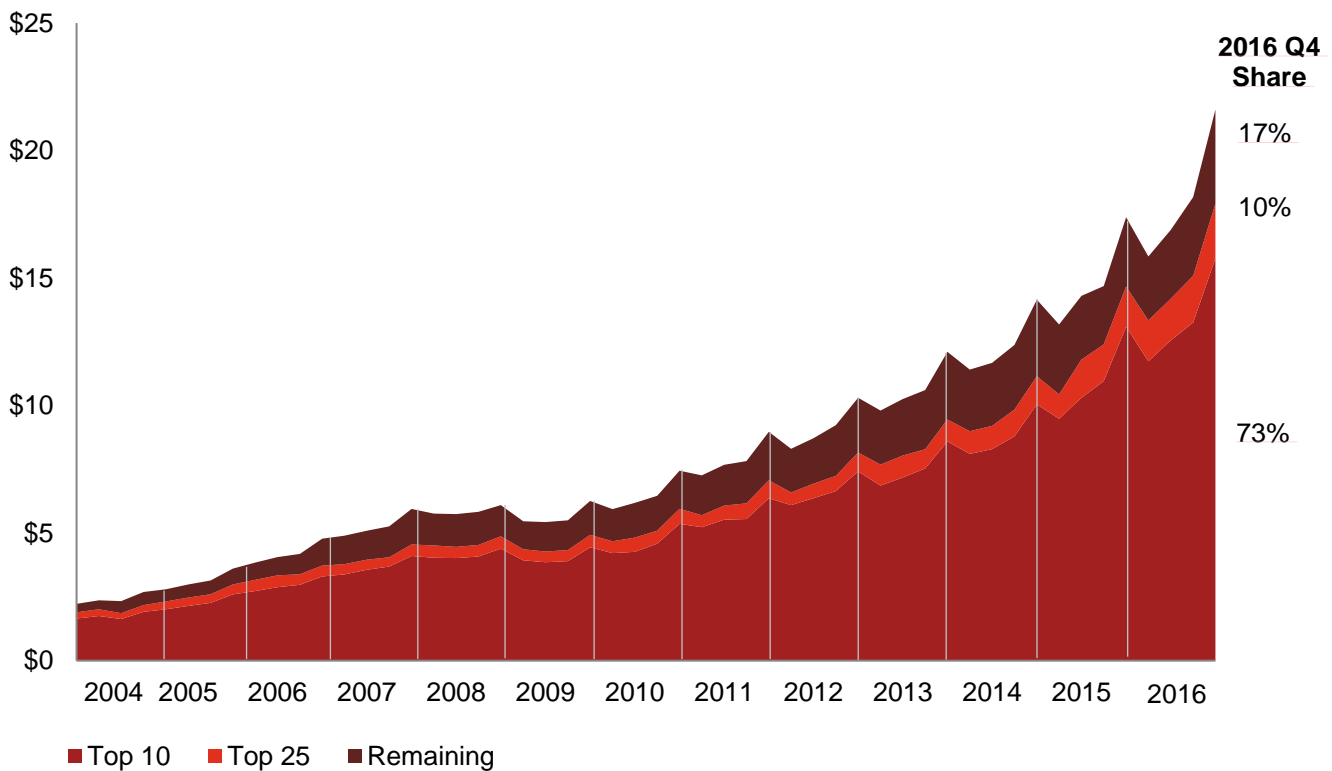
Revenue concentration

Top 10 companies command 73% of revenues in Q4 2016

Online advertising revenues remain concentrated with the 10 leading ad-selling companies, accounting for 73% of total revenues in Q4 2016, down from the 75% reported in Q4 2015. Companies ranked 11th to 25th accounted for 10% of revenues in Q4 2016, a slight increase from the 9% reported in Q4 2015.

Despite the emergence of a few heavyweights in internet advertising publishing, the concentration of top-10 revenues have remained relatively unchanged over the past ten years, fluctuating between 69% and 75%.

% share of total revenues



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

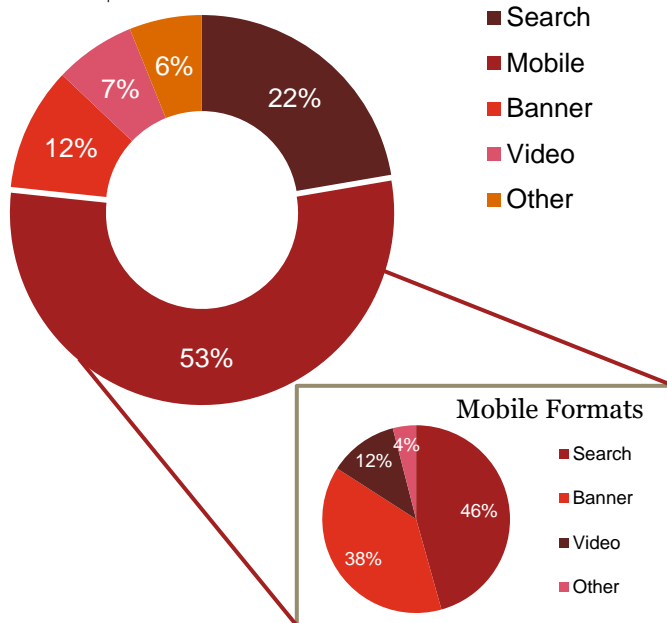
Ad format – Fourth quarter 2016 results

Mobile continues to dominate as the lead ad format in Q4 2016

- Desktop Search accounted for \$4.7 billion (22% of total) of Q4 2016 revenues, compared with \$5.6 billion (32% of total) in Q4 2015.
 - Inclusive of Mobile Search revenue, the Search format totaled revenues of \$10.0 billion (46% of total) in Q4 2016, up 18% from Q4 2015 (\$8.5 billion).
- Desktop Display-related** advertising accounted for \$4.0 billion or 19% of total revenues during Q4 2016, up 6% from the \$3.8 billion* (22% of total) reported in Q4 2015. Display-related** advertising includes Banner Ads (12% of revenues, or \$2.6 billion), and Video (7% or \$1.5 billion).
 - Inclusive of Mobile Display-related** revenue, the Display-related** format totaled revenues of \$9.9 billion (46% of total) in Q4 2016, up 30% from Q4 2015 (\$7.6 billion). Display-related** advertising includes Banner Ads (33% of revenues, or \$7.0 billion), and Video (13% or \$2.8 billion).
- Mobile revenues increased 68% from the \$6.9 billion (40% of total) reported in Q4 2015 to \$11.5 billion (53% of total) in Q4 2016. Mobile revenues consisted of Mobile Search (\$5.3 billion), Mobile Display-related** (\$5.8 billion), and Mobile Other*** (\$466 million).

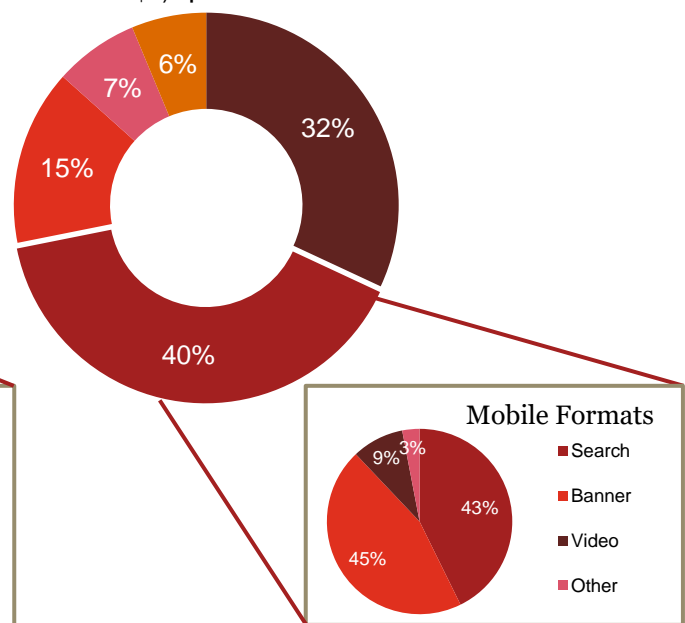
Ad formats – Q4 2016

Total - \$21.6 billion****



Ad formats – Q4 2015

Total - \$17.4 billion****



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

* 2015 data in FY2016 report may vary from 2015 data in FY15 report due to reclassification of Audio from “Rich Media” (or “Banner”) to “Other”

** Display-related formats include: Banners (Banners, Rich Media, and Sponsorship) and Video.

*** Other includes: Classifieds, Lead Generation, Audio, and Unspecified Other (“Unspecified Other” category was not specified by respondents).

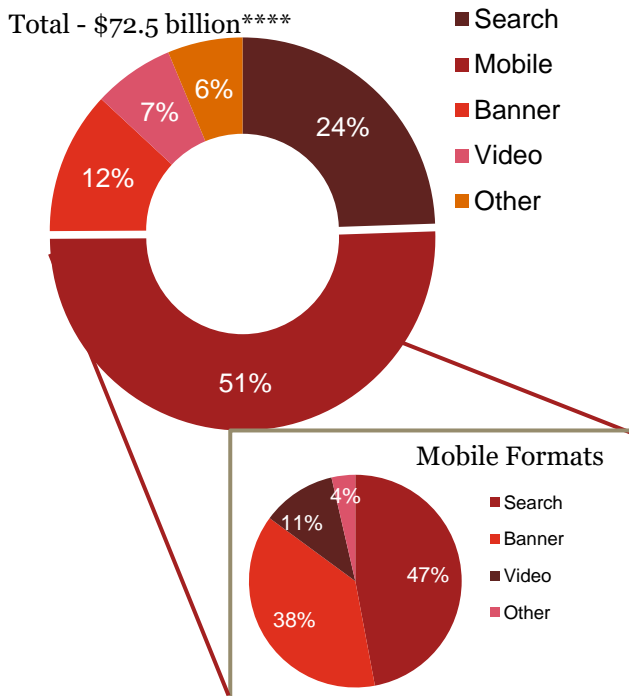
**** Amounts may not equal 100% due to rounding and omission of minor categories.

Ad format – Full year 2016 results

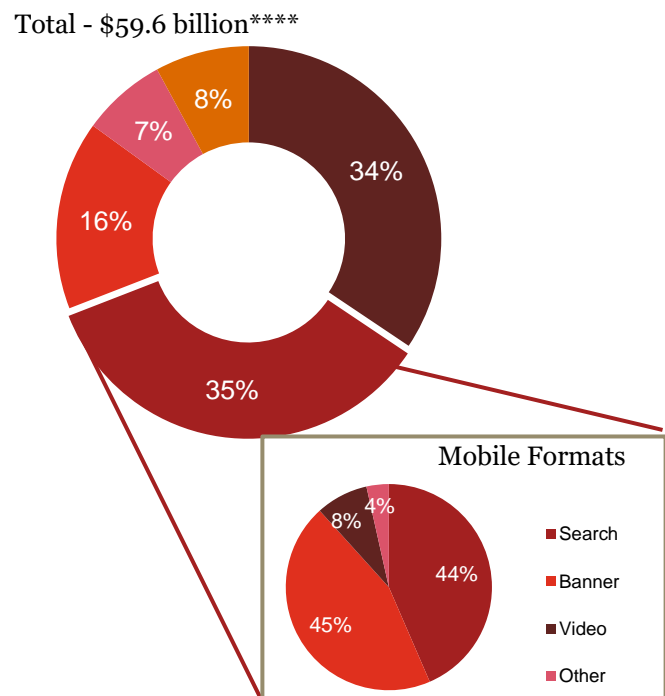
Mobile broke the barrier and flooded the digital ad space with 51% market share in 2016

- Desktop Search accounted for \$17.8 billion (24% of total) of FY 2016 revenues, down 13% from the \$20.5 billion (34% of total) in FY 2015.
 - Inclusive of Mobile Search revenue, the Search format totaled revenues of \$35.0 billion (48% of total) in FY 2016, up 19% from FY 2015 (\$29.5 billion).
- Desktop Display-related** advertising accounted for \$13.6 billion (19% of total) of FY 2016 revenues, down 1% from the \$13.7* billion (23% of total) reported in FY 2015. Desktop Display-related** advertising includes Banner Ads (12% of FY 2016 revenues, or \$8.7 billion), and Video (7% or \$4.9 billion).
 - Inclusive of Mobile Display-related** revenue, the Display-related** format totaled revenues of \$31.7 billion (44% of total) in FY 2016, up 29% from FY 2015 (\$24.6 billion). Display-related** advertising includes Banner Ads (31% of FY 2016 revenues, or \$22.6 billion), and Video (13% or \$9.1 billion).
- Mobile revenues increased 77% from the \$20.7 billion (35% of total) reported at FY 2015 to \$36.6 billion (51% of total) at FY 2016. Mobile revenues consisted of Mobile Search (\$17.2 billion), Mobile Display-related** (\$18.1 billion), and Mobile Other*** (\$1.3 billion).

Ad formats – full year 2016



Ad formats – full year 2015



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

* 2015 data in FY2016 report may vary from 2015 data in FY2015 report due to reclassification of Audio from "Rich Media" (or "Banner") to "Other"

** Display-related formats include: Banners (Banners, Rich Media, and Sponsorship) and Video.

*** Other includes: Classifieds, Lead Generation, Audio, and Unspecified Other ("Unspecified Other" category was not specified by respondents).

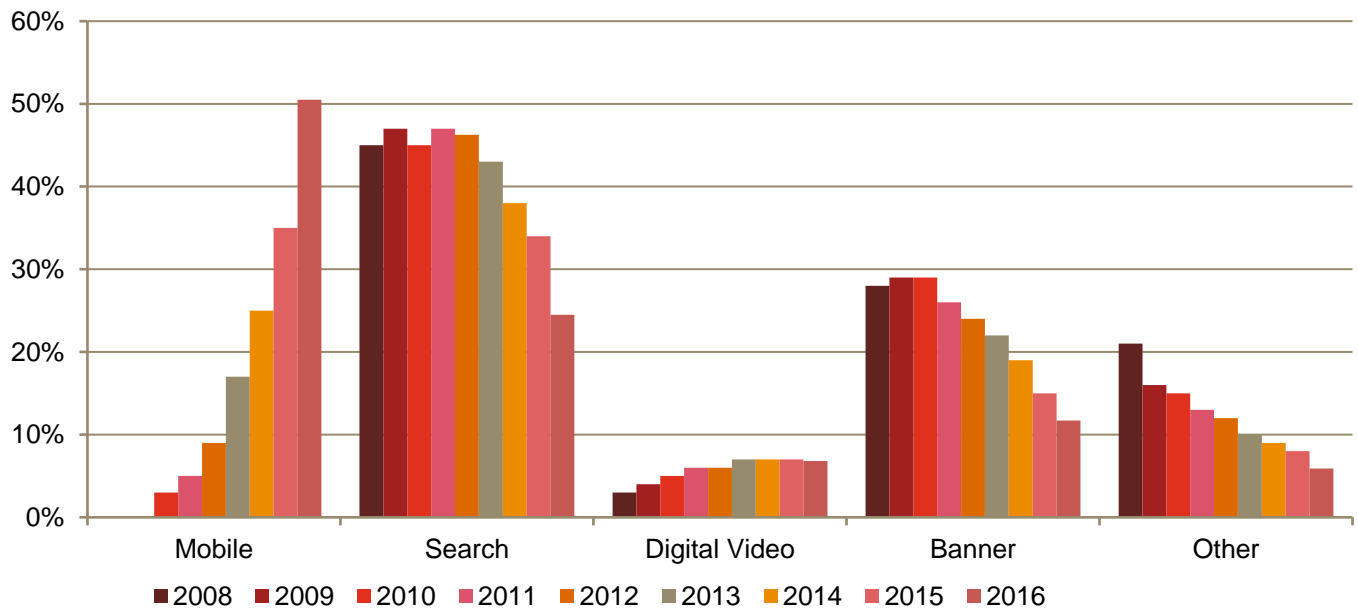
**** Amounts may not equal 100% due to rounding and omission of minor categories.

Historical format trends

Only Mobile and Desktop Video saw an increase in revenue from the previous year

- Mobile ad revenues continued to gain share, representing 51% of total FY 2016 revenues, as compared to 35% of total revenues reported in FY 2015 and 25% in FY 2014; Mobile, like Desktop, is comprised of multiple formats.
- Desktop Video revenues increased 16% from FY 2015; however, its percentage of total revenues remained constant as a percentage.
- Desktop Search lost its leading share and now represents 24% of FY 2016 revenues. Decline in its overall share is attributed to growth in Mobile and Mobile Search, which are included in the Mobile category.
- Desktop Search, Banner Ads, and Other are down slightly as a percentage of total revenue due to the substantial growth of Mobile.

Advertising format share, 2008 - 2016* (% of total revenue)



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

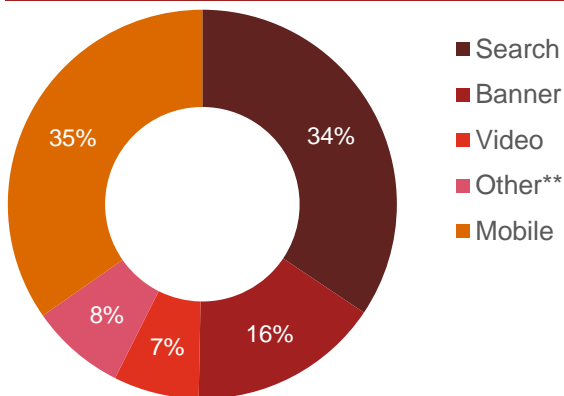
*Format definitions may have changed over the time period depicted, both within the survey process and as interpreted by survey respondents

Mobile narrowly surpasses desktop for the first time

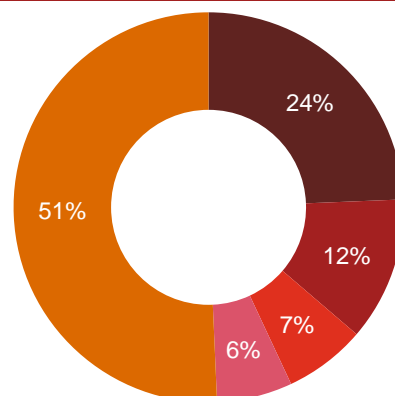
Mobile growth is driving demand for digital video advertising.

- Mobile now represents just over half of internet advertising, 50.5% in 2016, up from 34.7% in 2015.
- When we reallocate mobile activities to traditional formats, we note that digital video grew more than 50% from the previous year.
- Display-related formats grew more than 25% 2016, when mobile revenues are included.

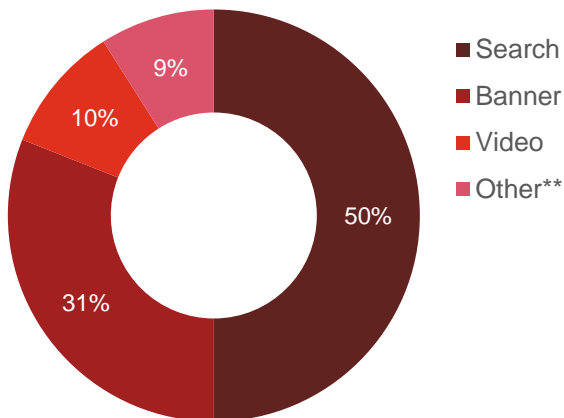
Ad Formats Mobile Separated – FY 2015



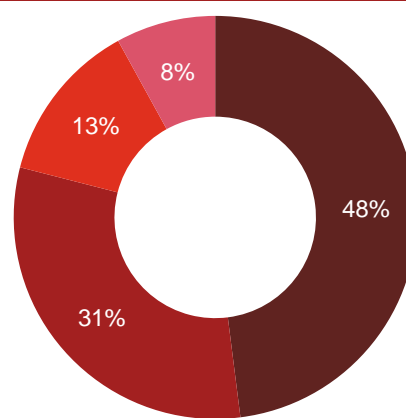
Ad Formats Mobile Separated – FY 2016



Ad Formats Mobile Included – FY 2015



Ad Formats Mobile Included – FY 2016



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

* Display-related formats include: Banners (Banners, Rich Media, and Sponsorship) and Video.

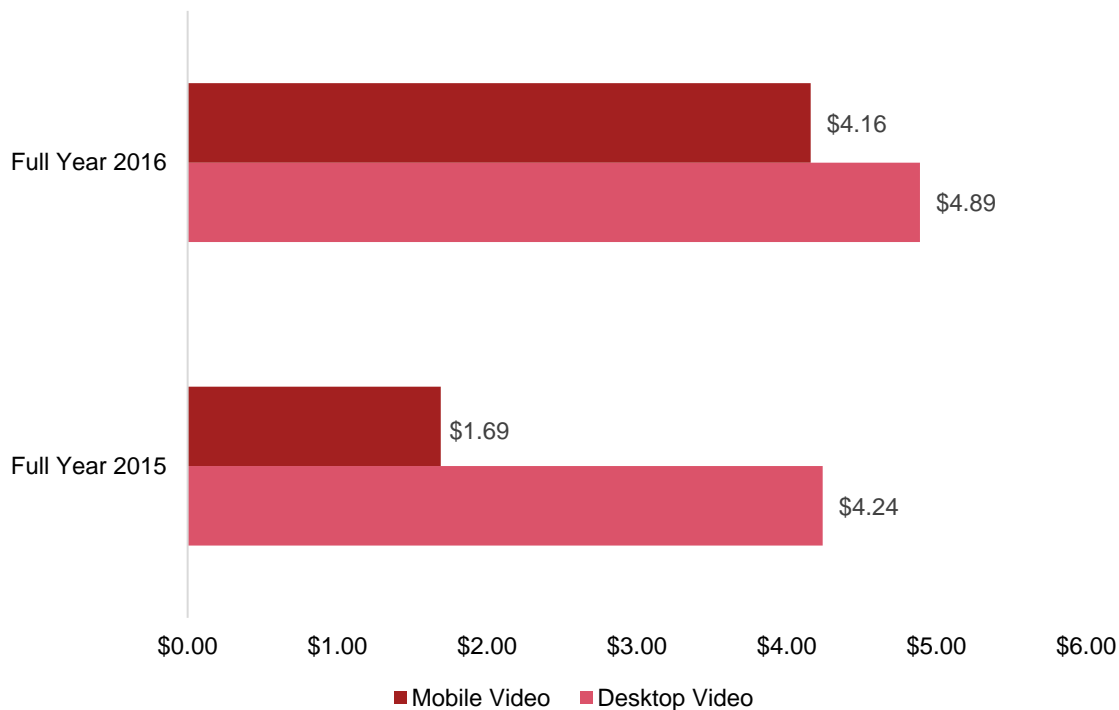
** Other includes: Classifieds, Lead Generation, and Audio.

The gap between desktop video and Mobile video is quickly closing

In FY 16, mobile video revenue was 85% of desktop video revenue.

- Total digital video, including mobile and desktop, rose to \$9.1 billion in FY 2016, up 53% from \$5.9 billion in FY 2015.
- Digital video on smartphones and tablets continued strong triple-digit growth, reaching \$4.2 billion in FY 2016, an impressive 145% rise from FY 2015.
- 46% of video ads were displayed on a mobile device in 2016, up from 29% in 2015.
- On desktop, digital video was the key growth driver, increasing 16% over FY 2015.

Historical Digital Video Revenues, Full-Year (\$ billions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

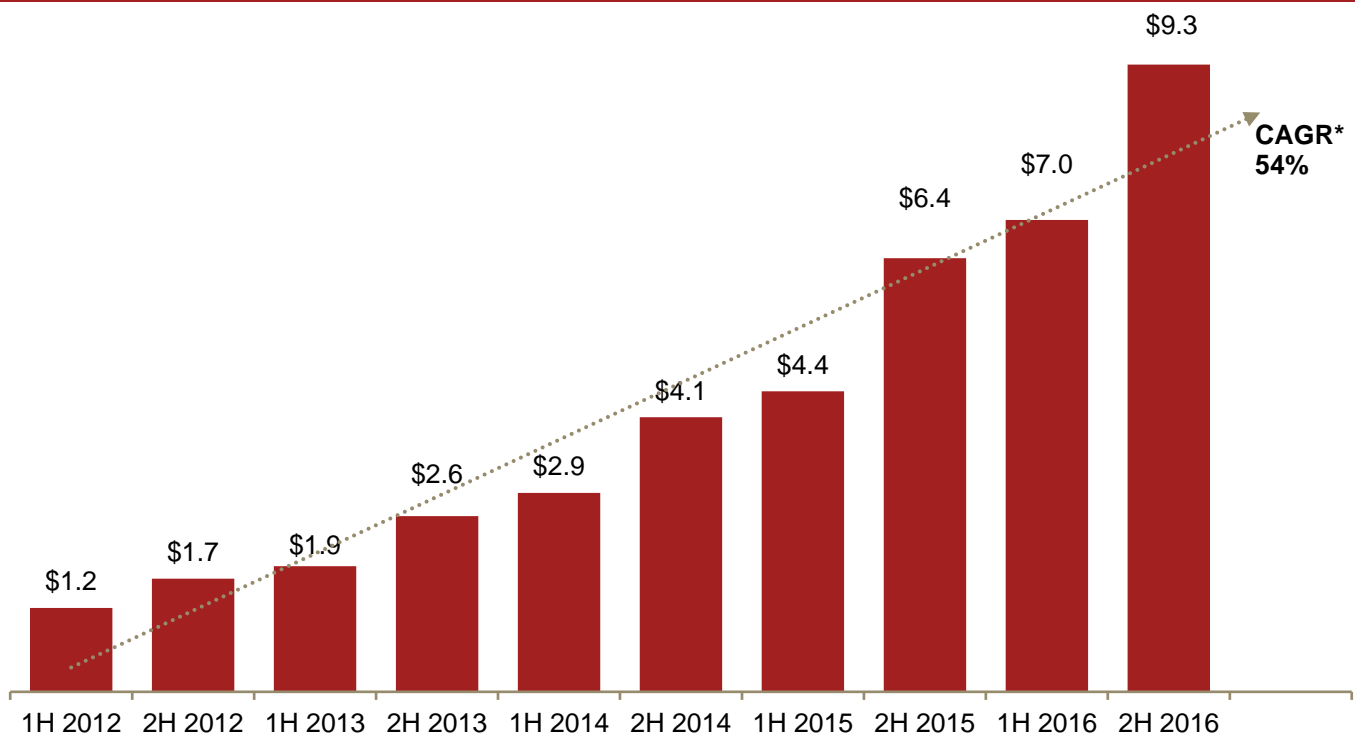
Social media advertising revenue

Social Media advertising revenue totaled \$16.3 billion for 2016, compared to \$10.9 billion in 2015.

For the second half of 2016, Social media revenue was \$9.3 billion. Year-over-year, Social media revenue was up 49% from FY 2015. Social continues its half-year growth trends - increases are reflected in the 54% compound annual growth rate of social from 2012 to 2016. Social's growth continues to play a key role in the growth of Mobile, as Social is a significant activity on Mobile.

Note: We define social media as advertising delivered on social platforms, including social networking and social gaming websites and apps, across all device types, including desktop, laptop, smartphone and tablet.

Social media advertising revenue 2012-2016 (\$ billions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

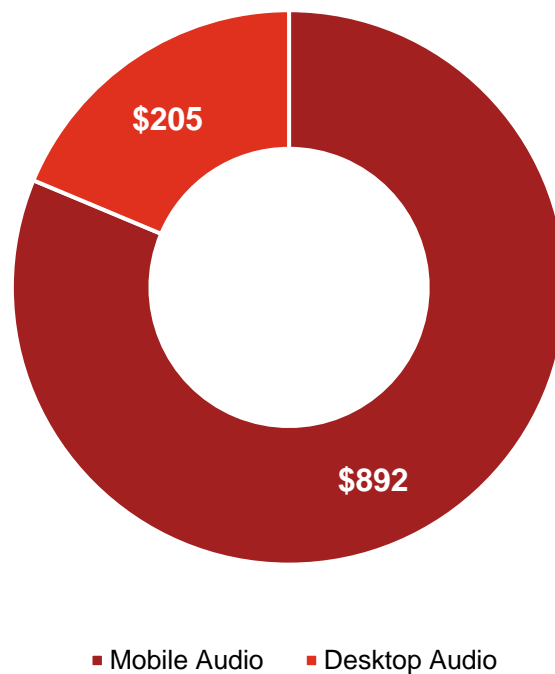
* CAGR: Compound Annual Growth Rate

2016 marks the debut of digital audio advertising as a standalone category

2016 saw \$1.1B in audio advertising revenue

In 2016, revenues from Audio advertising, particularly streaming music services, were significant enough to begin tracking within this report. Below are the FY 2016 revenue figures for desktop and mobile. Beginning in 2017, this category will be tracked for growth on desktop and mobile, with the latter being the clear revenue driver.

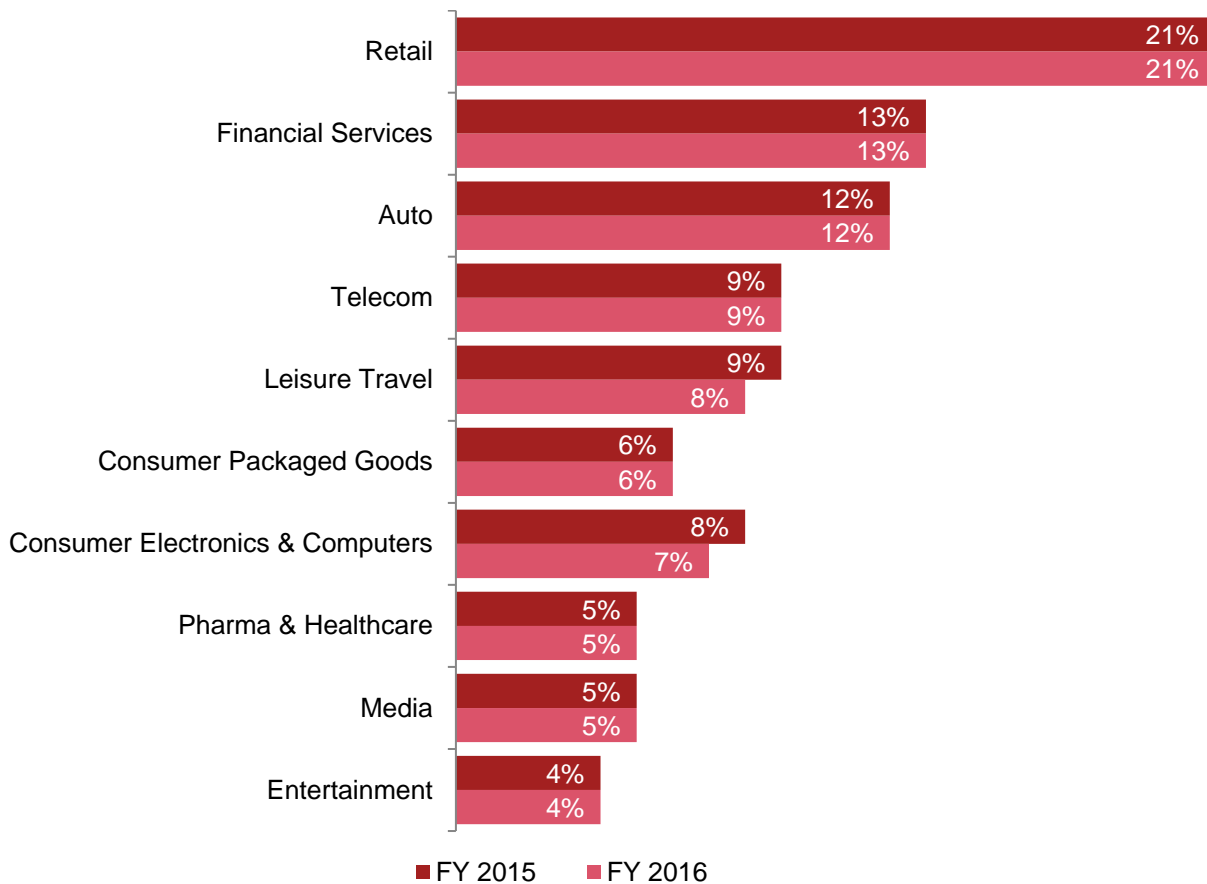
Audio advertising revenues by format, FY 2016 (in millions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

Industry advertising – Year-over-year comparison

Internet ad revenues by major industry category*, year to date: 2015 vs. 2016



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

* Industry category definitions may have changed over the time period depicted, both within the survey process and as interpreted by survey respondents. Amounts do not total to 100% as minor categories are not displayed.

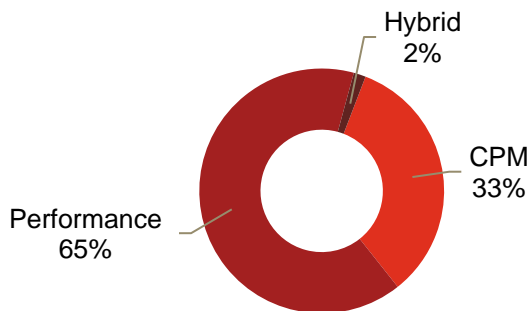
Revenues by pricing model

Performance-based pricing shows slight downtick while cost per medium/thousand shows slight uptick

- Approximately 64% of FY 2016 revenues were priced on a performance basis, down from the 65% reported in FY 2015.
- Approximately 35% of FY 2016 revenues were priced on a cost per medium/thousand (CPM) or impression basis, up from the 33% reported in FY 2015.
- Approximately 1% of FY 2016 revenues were priced on a hybrid basis, down from the 2% reported in FY 2015.

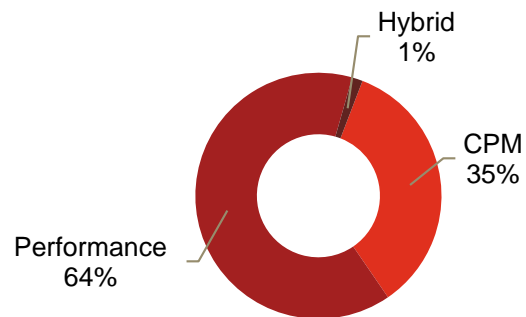
Pricing models – FY 2015

Total - \$59.6 billion



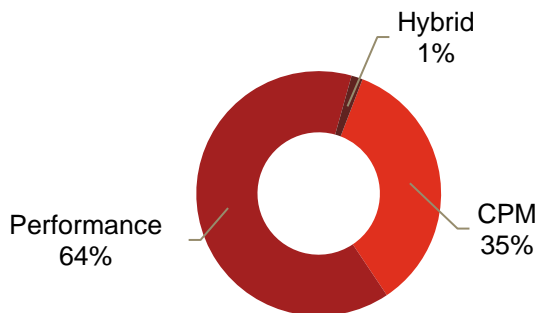
Pricing models – FY 2016

Total - \$72.5 billion



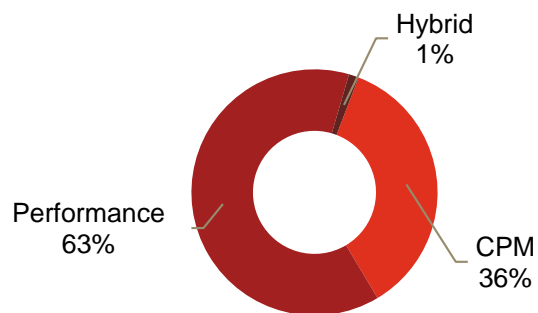
Pricing models – Q4 2015

Total - \$17.4 billion



Pricing models – Q4 2016

Total - \$21.6 billion



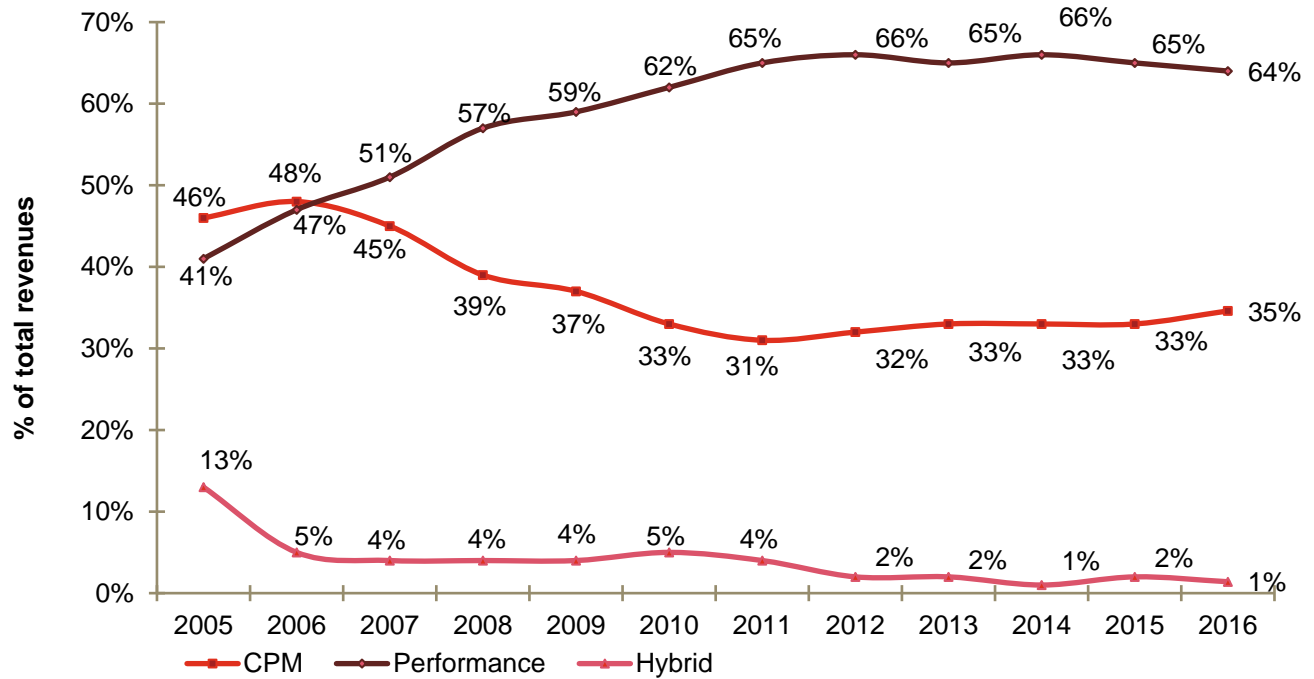
Source: IAB/PwC Internet Ad Revenue Report, FY 2016

Historical pricing model trends

Performance-based pricing remains the preferred model, but a consistent trend is emerging

- Performance-based pricing, the leading pricing model since 2006, declined slightly to 64% of total revenue in FY 2016.
- CPM/impression-based pricing increased in the full year 2016, up to 35% of revenue from 33% in FY 2015.
- Hybrid pricing declined to 1% of total revenues in FY 2016, down from the 2% reported in FY 2015.

Internet ad revenues by pricing model*



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

* Pricing model definitions may have changed over the time period depicted both within the survey process and as interpreted by survey respondents.

Appendix

Definitions of leading industry categories

The industry categories used in the "IAB Internet Advertising Revenue Report" were sourced from the North American Standard Industrial Classification (SIC) Manual.†

Retail	Includes mail order/catalog, apparel, restaurants/fast food, home furnishings/textiles, toys, pet food/supplies, appliances, jewelry, drugstores, retail stores, and cosmetics stores.
Automotive	Includes all automotive-related categories including sale/purchase of vehicles and parts and maintenance.
Entertainment	Includes film, music, TV, box office, video games, and amusement & recreation.
Consumer packaged goods	Includes packaged goods, food products, household products, and tobacco.
Leisure travel	Includes travel, hotel, airlines, and resorts.
Consumer Electronics and Computers	Includes hardware (computers, computer storage devices, and computer peripheral equipment), consumer electronics, prepackaged software (operating, utility, and applications programs), local area network systems and network systems integration, computer processing, and data preparation and data processing services.
Financial Services	Includes commercial banks, credit agencies, personal credit institutions, consumer finance companies, loan companies, business credit institutions, and credit card agencies. Also includes companies engaged in the underwriting, purchase, sale, or brokerage of securities and other financial contracts.
Telecommunications	Includes point-to-point communications services, including cellular phone services, paging services, wireless internet access, and wireless video services. Includes multichannel video providers on a subscription fee basis (e.g., cable television, wireless cable television, and direct broadcast satellite services).
Pharmaceutical & Healthcare	Includes pharmaceutical products, facilities, services, researchers, and biological products. Also comprises establishments providing healthcare and social assistance for individuals as well as personal care, toiletries, and cosmetic products.
Media	Includes establishments primarily engaged in radio and television broadcasting (network and station) including commercial, religious, educational, and other radio or television stations. Also includes establishments primarily engaged in publishing newspapers, periodicals, and books.

†Survey participants reported results based on the 20 industry categories, listed on page 25, which were used specifically for the "IAB Internet Advertising Revenue Report." This is consistent with other relevant industry categorization sources that measure advertising spending by industry. For purposes of this report, PwC classified a number of individual categories under "Retail."

Definitions of advertising formats and pricing models

Banner Advertising	Advertiser pays an online company for space on one or more of the online company's pages to display a static or linked banner or logo.
Sponsorship	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 video. Sponsorships fall into several categories: <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
Email	Banner ads, links or advertiser sponsorships that appear in email newsletters, email marketing campaigns and other commercial email communications. This includes both ads within an email or the entire email.
Search	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). Search categories include: <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	Fees paid by advertisers to online companies that refer qualified potential customers (e.g., auto dealers which pay a fee in exchange for receiving a qualified purchase inquiry online) or provide consumer information (demographic, contact, and 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, -lead or -inquiry), and can include user applications (e.g., for a credit card), surveys, contests (e.g., sweepstakes) or registrations.
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

Display-related ads that integrate some component of streaming interactivity. Rich media ads often include flash or java script, but not content, and can allow users to view and interact with products or services (e.g., scrolling or clicking within the ad opens a multimedia product description, expansion, animation, video or a “virtual test-drive” within the ad).

All IAB Rising Stars ad formats are considered Rich Media. Video commercials that appear in video players are considered Video Ads, not Rich Media.

“Interstitials” have been consolidated within the rich media category and represent full- or partial-page text and image server-push advertisements which appear in the transition between two pages of 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 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.
 - Pop-up ads and pop-under ads – an advertisement that appear in a separate window which automatically loads over an existing content window, without an associated banner.
 - Daughter windows – an advertisement that runs in a separate window associated with a concurrently displayed banner. The content and banner are typically displayed first, followed by the daughter window.
 - 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).
-

Definitions of advertising formats and pricing models

Digital Audio	<p>Partially or entirely advertising-supported audio programming available to consumers on a streaming basis, delivered via the wired and 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 stations;• Purely online radio stations, with either professional or amateur DJs;• Personalized (i.e., without human editors/DJs) and on-demand, streamed audio services that create playlists based on user preferences of artists, tracks, or genres; <p>Music or spoken word audio content delivered within a different website or application, e.g., in-game music services.</p> <p>Digital Audio is currently included in Other.</p>
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> <p>Video Overlays are also categorized as Digital Video Advertising. Video overlays include small ads that appear on top of digital video content. They can appear to be display, video, rich media, text or another ad format but are contained within the video player.</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, video, audio, sponsorships, and rich media), and Other 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.

Methodology

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;
- Identifies non-participating companies and applies a conservative revenue estimate based on available public sources; and,
- Analyzes the findings, identifies and reports key trends.

Survey industry categories

Automotive

Beer/Wine/Liquor

Business Products/Services

Computers (Hardware/Software)
and Consumer Electronics

Consumer Packaged Goods, Food,
Non-Alcoholic Beverages and

Candy

Educational Services

Entertainment (Film, Music, TV,
Box Office, Video Games,

Amusement/Recreational)

Financial Services (Banks,
Insurance, Securities, Mortgages)

Personal Care, Toiletries, and

Cosmetics

Drugs and Remedies

Manufacturing

Media

Professional Sports and Sporting &

Athletic Goods

Real Estate

Restaurants/Fast Food

Retail, Mail Order, Catalogs
and Apparel

Telecommunications: Telephony,
Cable/Satellite TV Services, ISPs

Toys/Games

Leisure Travel (Airfare,
Hotels, Resorts)

Business Travel (Airfare,
Hotels, Resorts)

About the interactive advertising bureau

The Interactive Advertising Bureau (IAB) empowers the media and marketing industries to thrive in the digital economy. It is comprised of more than 650 leading media and technology companies that are responsible for selling, distributing and optimizing digital advertising and marketing. Together, they account for 86 percent of online advertising in the United States. Working with its member companies, the IAB evaluates and recommends standards and practices and fields critical research on interactive advertising. The organization is committed to professional development, elevating the knowledge, skills, and expertise of individuals across the digital marketing industry. The IAB also educates marketers, agencies, media companies and the wider business community about the value of interactive advertising. Founded in 1996, the IAB is headquartered in New York City.

Overall report guidance provided by IAB leadership

Executive Committee

President and CEO
Randall Rothenberg
IAB
Joe Apprendi
Collective
David Moore
Xaxis

Chairman
Lauren Wiener
Tremor Video
David Morris
CBS Interactive
Scott Schiller
NBCUniversal

Vice Chair
Jim Norton
Condé Nast
Vivek Shah
Ziff Davis, LLC
Rik van der Kooi
Microsoft Advertising

Ex-Officio

Founding Chairman
Rich LeFurgy
Archer Advisors

Treasurer
John Toohey
Charter Communications

Secretary
Stu Ingis
Venable LLP

Board of Directors

Lee Brown
Buzzfeed
Seth Dallaire
Amazon Media Group
Rick Erwin
Acxiom
Eric Franchi
Undertone
John Frelinghuysen
Disney
Keith Grossman
Bloomberg
Chris Guenther
NewsCorp
Jed Hartman
The Washington Post
Mark Howard
Forbes Media
Allie Kline
AOL

Meredith Kopit Levien
The New York Times
Seth Ladetsky
Turner Broadcasting System
Warren Lapa
Spectrum Reach
Jeff Lucas
Snapchat
Jean-Philippe Maheu
Twitter
Kirk McDonald
PubMatic
Marian Pittman
Cox Media Group
Penry Price
LinkedIn
Sridhar Ramaswamy
Google
Michael Rubenstein
AppNexus

Samantha Skey
SheKnows Media
Brad Smallwood
Facebook
Jeremy Steinberg
The Weather Company
John Trimble
Pandora
Lisa Utzshneider
Yahoo
Jacob Weisberg
Slate
Rick Welday
AT&T AdWorks
Steven Wolfe Pereira
Neustar
Troy Young
Hearst Magazines Digital Media
Joe Zawadzki
MediaMath

PwC's technology and entertainment, media, and communications practices

As business, accounting, and tax advisors to many of the world's leading Entertainment, Media, and Communications (EMC) and Technology (Tech) companies, PwC (www.pwc.com) has an insider's view of trends and developments driving the industry. With approximately 1,200 practitioners serving EMC and Tech clients in the United States, PwC is deeply committed to providing clients with industry experience and resources. In recent years, our pioneering work in EMC and Tech 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 of the EMC and Tech sectors, including broadband, wireless, the internet, music, film, television, publishing, advertising, gaming, theme parks, computers and networking, and software. 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

For more information, contact one of the following PwC professionals:

New York
David Silverman
Partner, Assurance Services
646.471.5421
david.silverman@us.pwc.com

New York
Russ Sapienza
Principal, Advisory Services
646.471.1517
russell.j.sapienza@us.pwc.com

New York
Brian Gaffney
Manager, Advisory Services
646.471.4722
brian.gaffney@us.pwc.com

Boston
Vic Petri
Partner, Assurance Services
617.478.1698
victor.petri@us.pwc.com

San Jose
Mike Pearl
Principal, Assurance Services
408.817.3801
michael.pearl@us.pwc.com

Seattle
Matt Hobbs
Partner, Advisory Services
206.398.3326
matthew.d.hobbs@us.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.

