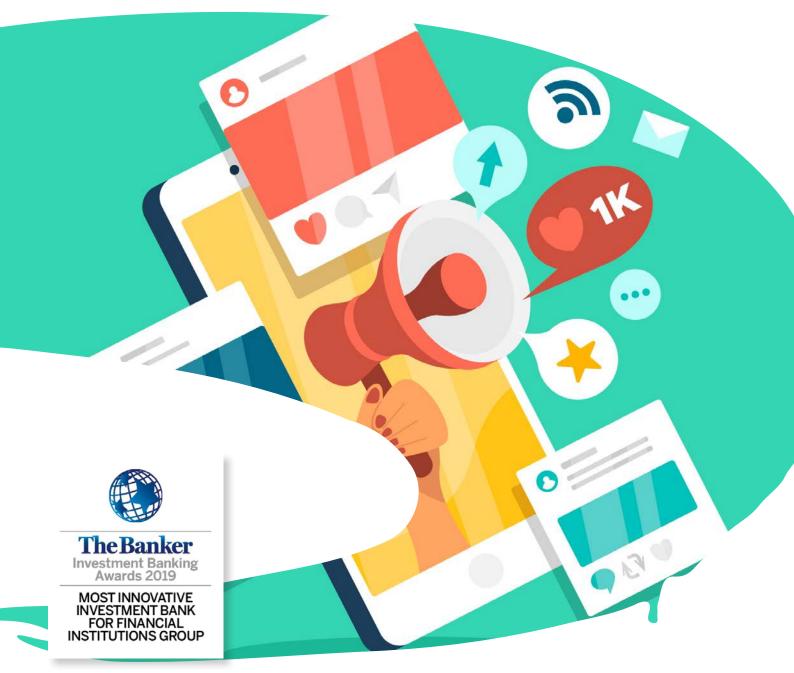


NATIXIS EQUITY THEMATICS

DIGITAL ADVERTISING

END OF THE PARTY?

EQUITY DERIVATIVES



THIS DOCUMENT IS FOR INSTITUTIONAL INVESTORS ONLY - NOT TO BE FORWARDED TO RETAIL CLIENTS

Marketing Communication: This document has not been developed in accordance with legal requirements designed to promote the independence of investment research and its author(s) is/are not subject to any prohibition on dealing in the relevant financial instrument ahead of the dissemination of the marketing communication.





"Business has only two functions – marketing and innovation."

Milan Kundera, Novelist



Executive Summary

The digital advertising industry has had a tremendous decade of growth. In line with the rise of e-commerce, an entire ecosystem of dedicated ad-tech companies has been created, challenging the role of traditional media agencies, and redefining the balance of power within the sector. Facebook and Google now enjoy a clear duopoly and attract a very large part of the global ad-spend, thanks to their hundreds of millions of identified users, and their extensive use of artificial intelligence and big data analytics. However, the party could slowly be coming to an end in 2020.

The Covid 19 pandemic has of course placed an enormous amount of pressure on advertising budgets in the first part of the year and, for many of the smaller players, it could be difficult to survive a further deterioration of the macro-economic environment, in particular, in case of a second wave of contamination.

Even before the pandemic, advertising activity was starting to show clear signs of a deceleration, and this, despite a number of promising niches, such as Connected TV, Other-The-Top devices and digital audio.

As Facebook and Social Platforms are starting to face the full wrath of consumers regarding their content policies, the highly complex programmatic advertising universe, which is helping automate the trading of media space online, is also coming under intense scrutiny after PwC published an eye-opening study in May showing that 15% of the money spent by digital marketers disappears into the mist of this technological black hole.

Finally, the implementation of stricter data protection and privacy laws around the world means that business models urgently need to evolve as third-party cookies get progressively phased-out.

In this note, we explore the various types of companies in the ad-tech space, from Social Networks to Data Management Platforms; from Demand and Supply Side Platforms to Ad Exchanges and traditional Media Agencies. In many cases, equity valuations are already grossly inflated and as we potentially enter a more mature era for the sector, a more cautious approach to investment is needed to avoid disappointment. In the end, perhaps the best way forward is to take another look at the unloved – but much cheaper - media agencies: these have faced many hurdles over the past few years but have managed to retain an important and lucrative advisory role, whilst also keeping creativity at the core of their business: even on the Internet, it is often crucial to be able to bridge the gap between "reaching" and "touching" a customer.

Enjoy the read!

Eríc Benoíst

Contents

2020 - END OF THE PARTY?	06
PROGRAMMATIC TRADING: A WEB OF DECEIT?	08
THE 3 RD PARTY COOKIE'S COOKED!	10
ESCAPING THE WALLED GARDENS	11
2021 - BACK TO BASICS?	12

Eric Benoist Equity Derivatives Strategist eric.benoist@natixis.com +44 (0) 203 216 9397 www.research.natixis.com Design Financial Engineering Marketing financial-engineering-marketing@natixis.com

2020 - end of the party?

The global advertising industry has been enjoying a decade of constant innovation and growth, as evidenced by the meteoric rise of social networks and the proliferation of ad-tech firms around the world. The resulting use of big data analytics and artificial intelligence as a way to systematically target new customers online has certainly led to the heightened disruption of traditional publishers' and agencies' business models. As the digital marketing ecosystem continues to attract investment and benefits from the acceleration of e-commerce volumes, the more established media groups have been forced into a complete rethink of their role, often leading to confusion, apathy and an underwhelming stock performance.

FACEBOOK & GOOGLE VS. TRADITIONAL MEDIA AGENCIES: 5Y STOCK PERFORMANCE IN USD



Source: Bloomberg

Meanwhile, the phenomenal success of smaller, younger and often barely profitable ad-tech companies has sometimes eclipsed that of Facebook and Alphabet themselves!

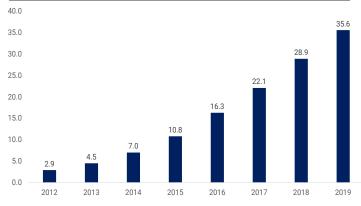




Source: Bloomberg

In 2020, it sometimes feels like advertising is not so much about patiently building brand equity anymore. Instead, it feels like it is about reaching each specific individual, and selling to them based on the accurate tracking of their online behaviour in real time. With 1.73bn active users logging onto Facebook each day and more than 3.5bn searches being processed daily on Google, it isn't hard to see how these two companies, referred to as the "Walled Gardens" by industry professionals, have managed to make themselves so uniquely unavoidable...In the USA, by far the largest advertising market in the world, social internet advertising now represent 28.6% of all digital advertising revenues (35.6bn USD) and is likely to grow further in the coming years.

US SOCIAL MEDIA ADVERTISING REVENUE (2012 -2019), BN USD

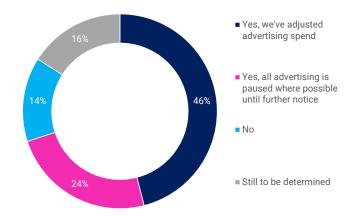


Source: IAB / PwC Internet Ad Revenue Report, FY 2019

Unfortunately, the party could slowly be coming to an end.

The Covid19 pandemic is indeed threatening – at least temporarily – to close the financial floodgates of the real economy. According to the Interactive Advertising Bureau (IAB), 24% of US buy-side companies have decided to pause ad spending until further notice, whilst another 46% expect to make short-term adjustments to their Q2 20 plans.

ARE YOU MAKING ANY MARCH TO JUNE, ADVERTISING SPEND CHANGES AS A RESULT OF CORONAVIRUS?

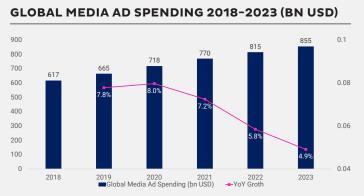


Source: IAB, March 2020, survey of 390 Buy-side companies

Of course, it is not unreasonable to believe that, due to the exceptional nature of the ongoing crisis, the industry may quickly return to its normal spending patterns as soon as the sanitary crisis is under control. Nevertheless, signs of a slowdown were already visible before the pandemic and it is therefore not completely unreasonable to believe that 2020 could also mark the beginning of a new, less exuberant, and more mature era.

In March 2019, analysts at eMarketer were predicting that total worldwide ad spend would increase from 617bn USD in 2018 to 855bn USD in 2023, exhibiting a decent 6.7% CAGR over the period. We note however that their projected growth trajectory appeared significantly flatter after 2020.

EQUITY DERIVATIVES INSIGHT



Source: eMarketer. March 2019

Similarly, digital advertising was expected to grow at a slower pace, despite achieving a compelling 12.8% CAGR over the same period and overtaking traditional ad spend for the first time in 2019.

DIGITAL AD SPENDING WORLDWIDE, 2018-2023 (BN USD)



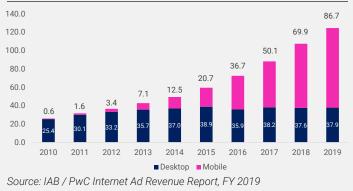
Source: eMarketer, March 2019

Far be it from us to announce the irreversible decline of the whole e-advertising industry on the back of those numbers - after all, maturity is not necessarily a negative attribute - but perhaps is it time to adopt a more selective approach towards investment in the sector and to take a much deeper look at where value is likely to be generated going forward.

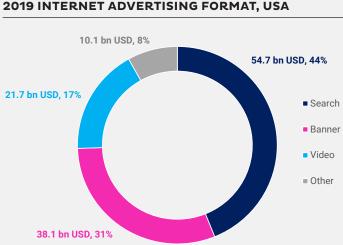
Indeed, some digital advertising segments will continue to outperform strongly:

Mobile internet advertising, for instance, will attract an increasing share of total spend vs. desktop computers: in America, 7 USD out of every 10 USD of revenue is already derived from a mobile device and the trend isn't about to break.

US DESKTOP VS. MOBILE FULL YEAR INTERNET AD REVENUE (2010-2019), BN USD



The increasing popularity of Over-The-Top (OTT) streaming content (Hulu, Roku, gaming consoles etc...) is providing a strong avenue of growth for digital videos. The format now represents 17.4% of all US internet advertising revenues (21.7bn USD), up 34% YoY overall, and even 43.9% on mobile devices, typically allowing brands to connect with multiple generations of consumers in a more authentic and richer way at a time when the traditional TV ad market is losing momentum fast.



Source: IAB / PwC Internet Ad Revenue Report, FY 2019

However, two elements will give rise to particular caution in the months ahead:

- First and foremost, the functioning of the extremely opague programmatic trading universe, through which the automated buying and selling of online advertising spots is allowed to take place, has come under intense scrutiny from market participants after an eye-opening study by PwC revealed in May that billions of dollars of advertising money mysteriously disappeared each year into this gigantic technological black hole involving thousands of ad-tech companies. As advertisers and publishers start to re-assess the value of the tools at their disposal, traditional media agencies can finally claim back some of their previous grandeur.
- Second, the implementation in 2020 of the GDPR data protection regulation in Europe is likely to be followed by similar efforts elsewhere. California has launched its own Consumer Privacy Act in 2020 and countries like Japan or Australia already have a strict framework in place. This more stringent regulatory environment will inevitably mark the end of the 3rd party cookie. To everyone's surprise, Google even announced recently that they would stop supporting the spying codes in Chrome by 2022. Unfortunately, a large number of ad-tech players still rely on them to provide analytics, retargeting services or customer segmentations. They will have to quickly reinvent themselves if they are to comply with the new rules, and to this date, no real consensus has emerged as to how exactly this might happen.

In the following two sections, we take a closer look at these recent evolutions as well as their implications for tech firms, advertisers, publishers and media agencies.

Programmatic Trading: a web of deceit?

According to the IAB, programmatic trading accounted for 81.5% of all non-Search US digital advertising spend in 2019. That's 57bn USD and a 20.7% progression vs. the previous year.

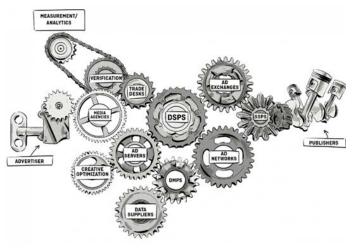
"There is no industry-wide consensus as for the term's definition, but it's fairly safe to say programmatic refers to the use of various technology, algorithms, and user data to quickly and efficiently automate the process of buying and selling online media".

Maciej Zawadziński, CEO of Clearcode and Piwik Pro

In the past, buy-side advertisers would typically contact sell-side publishers through an agency and agree terms and conditions relating to the display of specific commercials over the duration of an entire campaign. Today, technology has increased the immediacy of the process by leveraging on big data analytics and artificial intelligence. The complex mechanisms underlying those activities are not too dissimilar to those prevailing in financial markets. In their most standard configuration, here is how they work:

- An Advertiser generally starts building a campaign by gathering data through an external insight provider or, increasingly, a **Data Management Platform** (DMP). These allow the collection and organisation of first, second and third party data from any source including online, offline, CRM, point of sale data, web analytics tools, and external agencies. DMPs allow businesses to gain useful and comprehensive customer insight through various segmentations and are able to prepare and reformat the data for potential digital activation. Companies like Bluekai (Oracle), Lotame or Liveramp, operate in that segment.
- Once the advertiser has chosen a specific angle for their campaign (target audience), they hire a Media Agency for execution. Those agencies work with various Trading Desks and sometimes even offer the service in house. For instance, WPP have Xaxis, Omnicom work with Accuen, Publicis go through Vivaki and Havas through Affiperf...Trading Desks use a piece of software technology called a Demand Side Platform (DSP) to manage the campaign, integrating the curated data from their client's DMP and additional financial parameters such as maximum bid price. Popular DSPs include MediaMath, The Trade Desk and AppNexus (AT&T).
- The DSP then connects to an **Ad Exchange** such as Double Click (Google), OpenX, or the Rubicon Project, to bid for ad slots.
- On the other side of that Exchange, Publishers offer their available inventory through a **Supply Side Platform** (SSP) interface, such as Pubmatic or One by AOL. Each time a user loads up a publisher's web page on his browser and an ad space is available, the publisher's SSP sends a bid request to the exchange, disclosing the main characteristics of the proposed inventory (min price, format...) and live information about the type of user currently on the page.

- The exchange then holds an auction between the various DSPs. This process is known as **Real Time Bidding** (RTB) and allocates the slot to the highest bidder. DSPs will only bid for the slots associated with the users matching the parameters of their client's campaign.
- Once the winner has been designated, the corresponding ad, which sits somewhere on a remote **ad-server** is transferred to the publisher, via the SSP, and displayed on screen.



Source: Clearcode.cc

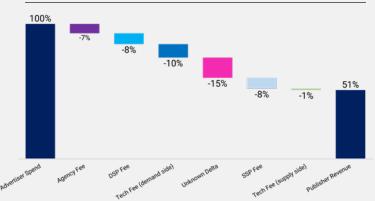
Programmatic trading has many advantages:

- **Speed:** it is far less time-consuming than the old manual ad placement process. Despite the high number of participants, the whole bidding takes a fraction of a second only and can be repeated at libitum without any human intervention.
- **Cost:** it is traded on a CPM basis (cost for 1000 ad impressions). The cost varies depending on each ad format, characteristics of the proposed audience and quality or visibility of the publisher itself, but typically ranges from 0.5 to 2.0 USD CPM, which is up to 5x cheaper than human-driven traffic on average.
- Scale: advertisers may reach a wider spectrum of publisher's, with billions of ad slots available, and target specific contexts or audiences at the same time. Publishers, on the other hand, may fill up their entire inventory, including "remnant" or low quality ad space by working with multiple exchanges, whilst optimising yield through the various auctions.
- **Real Time analytics:** Ad servers, DSPs and SSPs can provide real time analytics to advertisers and publishers, allowing them to assess the performance of a campaign in real time, and adjust parameters if necessary. Given the very high quantity of data generated in the process, artificial intelligence techniques are used to optimise the outcome.

But it also has serious drawbacks:

 Lack of control: it is very difficult to track where ads are being displayed and despite the constitution of black and white lists of partners with whom advertisers want or do not want to work, awkward, counter-productive situations can easily materialise: for instance, a chocolate bar commercial appearing at the top of a page advocating healthy lifestyle or a digital video about ground breaking oil exploration techniques on a website dedicated to renewable energies.

- Ad Fraud: Bots or software that are programmed to intentionally view ads, watch videos, or generate clicks can easily be used to divert advertising money. Similarly, falsely represented sites can fool DSPs into thinking their ads are going to a premium publisher's page, when they are in fact headed for an obscure corner of the web instead. In November 2018, a large botnet operation called 3ve was dismantled in Russia, having cost unsuspecting advertisers more than 35 million dollars over 5 years. 3ve managed to infect 1.7 million PCs with malware, set up 10,000 fake sites to impersonate legitimate publishers, generating up to 3 billion bid requests each day, and create 60,000 seller IDs with digital companies to enable fraudsters to receive ad placements and be paid accordingly. Needless to say, none of the ads involved in this scam were ever seen by a human being. The high sophistication of the strategies deployed to bypass security systems often makes it difficult to detect unauthorised traffic in real time. As a result, the total cost of ad fraud keeps increasing year after year: in 2019, eMarketer had it between 6.5bn and 19bn USD, which may have been an over-optimistic assessment of the situation. In 2016, the World Federation of Advertisers (WFA) famously stated that ad Fraud could become the second biggest organised crime enterprise after the drug trade! Although ad Verification software such as Moat Analytics or Interceptd provide advertisers and publishers with tools to better protect themselves, there is still far too much advertising money lost to criminals through the fog of programmatic exchanges.
- The PwC bombshell: between January and March 2020, the Incorporated Society of British Advertisers and PwC worked with 50 companies including agencies, advertisers, DSPs, SSPs and publishers to try and map the exact transfer of value through the programmatic supply chain in the UK. Out of 267 million ad impressions observed, only 12% could be successfully matched, whilst the rest could not be mapped due to "low data quality". More importantly, when following the transfer of money through the bidding process, PwC found that, on average, publishers received a meagre 51% of the total amount invested by brands, with the rest going to adtech companies in the middle. Worse, 15% of the total spend could not be traced back to any specific link in the chain and simply seemed to have mysteriously disappeared into the programmatic black hole.



PROGRAMMATIC INDUSTRY: ANALYSING ADVERTISER SPEND

Source: ISBA, PwC, Programmatic Supply Chain Transparency study, May 2020

A number of high profile advertisers have already decided to bring their programmatic activities in-house to try and reduce cost and regain control over their advertising and data collection environment. Unilever, Procter & Gamble, Netflix, Sprint, or Intel have all gone down that road. Overall, roughly 30% of brands have done the same and the trend is accelerating. However, the development of programmatic capabilities is not a simple task, and requires heavy investments coupled with costly advisory upfront: this could be the heyday of technology experts such as Accenture but will also keep many smaller businesses trapped into the system.

Other programmatic methods such as **Private Market Places** (PMPs) or **Programmatic Direct** are also increasingly being chosen over public auctions. Private Market Places are similar to Open Exchanges, but work on an invitation-only basis, and allow the bidding process to take place amongst a much smaller number of chosen participants. In that configuration, both the publisher and the advertiser have a clear idea of the inventory they are buying (generally premium standard), what CPM needs to be paid, and the type of creatives that are being displayed to users. However, the set-up implies a more direct communication between parties, and may therefore not be accessible to smaller advertisers with limited sell-side relationships. Media Agencies, with long-standing industry contacts, may therefore have an important role to play in bringing more customers to the table and improving transparency for all.

Without a much higher level of transparency however, the system is bound to reach its limits pretty soon, which should worry investors given the vastly inflated valuation multiples of some of the tech companies evolving in the sector.

		Non Programmatic (direct campaigns)				
Media Execution	Real-Time Bide	ding (RTB)		(unect campaigns)		
Туре	Public Auctions	Public Auctions Private Market Places (PMP / Deal ID)				
Price	Auction	Auction and / or Deal ID terms	Pre-defined	Pre-defined		
Direct Advertiser - Publisher relationship	No	Yes	Yes / Limited	Yes		
Inventory Volume	Non-guaranteed	Non-guaranteed	Guaranteed	Guaranteed		
Inventory Type	All inventory that the publisher decides to put on a public auction	Premium inventory	All, including premium inventory. Bulk Inventory (sometimes robust targeting is available)	All, including premium inventory. Bulk inventory with limited targeting.		
Delivery	DSP / Over RTB pipes	DSP / Over RTB pipes with a deal ID set	Programmatic Direct platform integrated with the publisher's ad server	Email/phone, manual ad tags entered in the publisher's ad server		

Source: Clearcode.cc

The 3rd party cookie's cooked!

Ad-tech investors should also worry about the implementation of a much more stringent regulatory environment relating to data protection.

The EU's 2018 General Data Protection Regulation (GDPR) now applies to any firm dealing with European citizens around the world. Article 5 of the law clearly states that the following principles must be respected and that personal data shall be:

- processed lawfully, fairly and in a transparent manner in relation to individuals (lawfulness and transparency)
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes (purpose limitation)
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed (minimisation)
- accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay (accuracy)
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed (storage limitation)
- processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures (integrity and confidentiality)

Companies that fail to comply with GDPR requirements can be fined up to 20 MEUR, or up to 4% of the annual worldwide turnover of the preceding financial year, whichever is greater. The FT reports that between May 2018 and November 2019, 785 administrative fines have been issued, including a 50M EUR fine against Google in France.

Europe is not alone in fighting for a better use of private data. California has launched its own Consumer Privacy Act in 2020 (CPPA) giving more control to their residents over the use of their personal information. The act is derived from the GDPR and is likely to inspire other US States to follow suit. New York, Illinois and Washington are expected to issue draft laws soon. As the Presidential Election nears, the theme is likely to be discussed more frequently and, should Joe Biden win in November, we expect a Democrat administration to seek an acceleration of the process at the federal level. The very high profile 5bn USD Facebook settlement approved in July 2019 by the FTC may then be followed by many similar cases.

Elsewhere Brazil is working to implement its own rules by 2021 (LGPD) despite significant political obstruction, Japan and South Korea are looking to bring their own regulation in line with the GDPR, and in Canada, newly re-elected Prime Minister Justin Trudeau recently tasked his minster of innovation to work with the justice minister and attorney general to create enhanced powers for the Office of the Privacy Commissioner of Canada. According

to the United Nations Conference on Trade and Development, 132 out of 194 countries have put in place some form of legislation to secure the protection of data and privacy: although these may not always be as developed as the European framework, they provide a foundation on which more regulation can be proposed. Eventually, existing legislations may be challenged in courts, then amended or strengthened but the trend is clear and it is not prudent to try and ignore it any longer

entration Protection Protect

DATA PROTECTION AND LEGISLATION WORLDWIDE

Source: United Nation Conference on Trade and Development, Feb 2020

For the ad-Tech ecosystem, the most immediate consequence will be the phasing-out of 3rd party cookies. Unlike their 1st party counterparts that are typically used to improve customer experience on a website, these are created by domains other than the ones visited by the user and are collected exclusively for tracking, targeting and advertising purposes. Apple's Intelligent Tracking Prevention system in Safari already blocks them by default. Firefox offers a similar service through its latest Enhanced Tracking Protection features and "Facebook Container" extension. More importantly, Google announced in January that Chrome, which accounts for nearly 70% of the global desktop internet browser market, would stop supporting the tracking codes by 2022. The 3rd party cookie appears to be well and truly cooked and for an industry that has so heavily relied on the technology to generate value, it is surely a deeply worrying moment.

As discussed earlier, programmatic trading is largely based on assessing the value of a publisher's inventory through 3rd party cookie data. But it doesn't stop here! Many marketing tech practices depend entirely on their presence inside your internet browser:

- Frequency Capping limits the number of times that a user is served a specific ad over a certain timeframe – without it, advertising fatigue would likely lower the response from potential customers and trigger counter-productive results, forcing advertisers to choose different media channels for their campaign.
- **Retargeting** allows a vendor to serve ads to customers who have previously visited their website. If you've ever abandoned a full shopping cart on an e-commerce platform to find fresh commercials about the very same products flashing aggressively in front of your flabbergasted eyes somewhere on your favourite news site, congratulations, you've been retargeted before! Interestingly, a company like Criteo (CRTO US), which has recognised expertise in that field and generates 2.2bn USD of annual revenue, dropped 24% in 2 days on the Nasdaq around the date of the Google Chrome announcement.
- **Social Media Plugins** allow users to "like" or "share" content on third party pages but will also place cookies on your device and serve ads depending on your browsing history.



Finally, **Post-View Attribution** assists vendors in determining the website on which an ad has last been seen by a user before purchasing a product and tracks the performance of a campaign. Without such tools to measure their investment, advertisers will be tempted to move away from standard display providers and shift budget towards click-based media such as search engines.

3rd party cookies won't completely disappear overnight, but their days are numbered, which could be marking the end of the road for many providers of ad-tech services and smaller online publishers. Sadly, for them, a viable alternative solution is yet to be found.

Escaping the Walled Gardens...

Several paths are currently being explored by industry specialists although none has attracted a clear consensus yet:

- Device Fingerprinting combines certain attributes of a device, such as operating system, type of web browser, IP address, and language settings to identify it as a unique device. It relies on the probability that a device recognized as having certain attributes on one day is the same device seen with those same attributes on another day. It is hard to see, however, how the technique actually fits the GDPR context... and naturally, Apple and Google have already declared it too privacy-invasive to support...
- Shared ID Solutions leverage 1st party cookies instead. Once a user has given consent, for example through entering their login details on a publisher's web page, their data is passed on to an ID provider. An ID, which is a unique string of random numbers and letters is then generated for that user, and shared back with the publisher for them to store in a 1st party cookie. All other participants in the digital supply chain are then given access to the shared ID and can perform their usual programmatic functions. DSPs like The Trade Desk or wider consortiums such as Digitrust, ID5 and the Ad Consortium offer competing solutions in that space. Unfortunately, it is unclear whether these will be supported by the main internet browsers in the long run - especially as they could be identified as cross-site tracking activity - and whether they will integrate smoothly with Google's new set of web analytics tools under their new "Privacy Sandbox" initiative.

Indeed, Google aren't wasting any time in re-shaping the future of privacy-compliant web analytics and are working on ways to store and process private data at the browser level, ensuring they never leave the user's device, whilst still allowing them to be accessed by advertisers in a controlled environment. The Privacy Sandbox will, in theory, provide all the necessary fraud detection, conversion measurement, and privacy safeguards needed by marketers to successfully advertise online in the future. It also introduces an interesting concept: the **Federated Learning of Cohorts**, or FLoC. The idea behind it is to use machine learning algorithms based on users' browsing history to build groups, or "cohorts", of people sharing similar interests before targeting them with dedicated ads depending on what category they fall into.

Google may want you to believe that they are here to save Digital Media from collapsing, but Matthieu Roche, CEO and Founder of ID5 makes a rather bleak assessment of the situation:

"Google plans to offer standardised replacement solutions that they define and own, making them available only via Chrome Browser APIs to independent publishers and ad tech vendors. Those who have differentiated themselves with custom profiling, bespoke targeting and attribution, advanced incrementally measurement, or any other intelligent data-driven capabilities will be forced to fall in line with the "Google standard". Ultimately, this move will undermine independent technology providers, and increase the dominance of the Walled Gardens as monetisation and audience engagement destinations for publishers and brands".

Matthieu Roche, CEO and founder of ID5

Although Matthieu obviously believes in a different, more neutral and independent approach to digital advertising through his ID5 platform, the almost resigned sentiment displayed above is shared by many in the industry. In the absence of a simple, widespread, universal plug-and-play cookie replacement solution, escaping the Walled Gardens may prove too challenging in the short to medium term.



2021 - back to basics?

As a result, digital advertising will be split in two worlds. On one side, Google, Facebook, Instagram, TikTok and the main Social Networks will continue to benefit from billions of clearly identified users, willing to sacrifice "some" privacy in order to enjoy the perks of the platforms. They will attract an increasing number of advertisers, disappointed by the lack of transparency and cost efficiency of the ad-exchange models. They will build loyalty thanks to the robustness of their post-cookie analytics solutions and will guarantee (at least in principle) compliance with GDPR or similar regulations. Even in a context of growing political pressure and upcoming US presidential elections where the breaking-up of FANG monopolies will be harshly debated, it is hard to picture a digital media environment without them. Associations of consumers might complain, they might call for boycotts, politicians might cry fool, big advertisers might distance themselves for a while but Facebook and the likes will continue to prevail until there is no more demand from the public for their services.

On the other side, a large number of traditional publishers, with a poor history of collecting data themselves and a mindset geared towards free content and programmatic revenues will be left hoping that independent ad-tech companies can finally agree on the terms of a universal ID solution. Unfortunately, in the short term, and as the Covid19 pandemic continues to bite into their cash reserves, they are more likely to revisit their business models and invest on subscription-driven quality content, first party data monetization and contextual advertising whenever possible.

Meanwhile, the programmatic world will go through a phase of rationalisation. Many middlemen will disappear or consolidate into larger one-stop shops offering the full stack of digital services

in a more transparent and cost efficient way. As the supply chain becomes leaner, and margins come under intense scrutiny, players with the greatest exposure to faster growing media such as Mobile App environments, OTT, Audio and Connected TV will continue to thrive. As more premium advertisers also decide to take their programmatic activities in-house, ad-Tech providers with the strongest set of commercial relationships will attract the lion's share.

At the core of the advertising ecosystem, Data Management will remain the crux of the matter. Advertisers may be able to collect first party data, but they will still need to "enrich" it with other sources to target their audience in a more accurate and efficient way. Similarly, publishers may be able to get first-hand visibility on their user base, but they will need the validation and credibility of a more neutral data provider to attract advertising money... Compiling data from many different sources, re-formatting it, segmenting it before plugging it into a fully softwarised digital environment for activation - whilst remaining fully compliant with privacy laws around the world - is no trivial task and will generate demand over the coming years.

For equity investors looking at the digital advertising environment for the first time, things can be tricky at the moment: excluding Social Networks and Google, the number of investable pure play ad-tech companies is small, and their valuation multiples look stretched to the extreme. Although analysts remain largely optimistic with high revenue growth expectations over the next 2 years, profitability is likely to remain low in the short term. These companies typically already trade significantly above the average 12M target price of the consensus, which we find worrying for an industry that is about to enter a more mature era. This doesn't mean that the sector should be avoided at all costs, but a cautious and selective approach may be needed to avoid disappointment (see Appendix for details).

Company	Ticker	Main Business	Market Cap (bn USD)	Buy (%)	Hold (%)	Sell (%)	12M Target (26/06)	Price (26/06)	Remaining Upside	Expected 19-21 Rev CAGR	Dec20 P/E
The Trade Desk	TTD US	Demand Side Platform	18.7	50%	45%	5%	302.06	407.03	-25.8%	18.9%	162.2x
The Rubicon Project	RUBI US	Supply Side Platform / Ad Exchange	0.7	100%	0%	0%	9.63	6.22	54.8%	23.9%	NA
Liveramp	RAMP US	Data Management Platform	2.8	83%	8%	8%	52.45	43.29	21.2%	17.0%	NA
Hubspot	HUBS US	Inbound Marketing	9.8	70%	25%	5%	191.24	225.04	-15.0%	16.4%	242.7x
Cardlytics	CDLX US	Credit Card-based Marketing	1.9	38%	50%	13%	46.5	68.84	-32.5%	14.6%	NA
Criteo	CRTO US	Retargeting Services	0.7	43%	43%	14%	12.83	11.16	15.0%	-14.0%	11.42x
Average				64%	29%	8%			2.9%	12.8%	NA
Facebook	FB US	Social Network	616.1	85.20%	9.30%	5.60%	245.33	216.08	13.5%	14.6%	29.8x
Google	GOOGL US	Search Engine / Web analytics	929.1	93%	7%	0%	1534.6	1362.5	12.6%	1.4%	32.8x
Average				89%	8%	3%			13.1%	8.0%	31.3x

Source: Bloomberg

Eventually, perhaps a more long-term, **back to basics** approach through a basket of Media and Advertising Agencies will provide better value. Analysts don't like them, but at current levels, they seem to offer more upside.

Company	Ticker	Main Business	Market Cap (bn USD)	Buy (%)	Hold (%)	Sell (%)	12M Target (26/06)	Price (26/06)	Remaining Upside	Expected 19-21 Rev CAGR	Dec20 P/E
Publicis	PUB FP	Media & Advertising Agency	7.468	47.60%	33.30%	19%	36.12	27.63	30.7%	-3.3%	8.3x
WPP	WPP LN	Media & Advertising Agency	9.271	52.20%	30.40%	17.40%	731	612.8	19.3%	-14.0%	11.9x
Omnicom	OMC US	Media & Advertising Agency	11.31	23.10%	38.50%	38.50%	59.05	52.78	11.9%	-3.6%	11.6x
Dentsu	4324 JT	Media & Advertising Agency	6.9774	27.30%	45.50%	27.30%	3177.8	2592	22.6%	0.8%	18.6x
Interpublic Group of Cos	IPG US	Media & Advertising Agency	6.32	50%	33.30%	16.70%	18.7	16.22	15.3%	-11.3%	12.3x
Average				40%	36%	24%			20.0%	-6.3%	12.5x

Source: Bloomberg

Over the past 5 years, they have had to face strong headwinds, losing large chunks of revenues to the programmatic space, and trying to dissuade their largest clients from internalising every aspect of their marketing processes. It has been a soul-searching experience, fighting off, amongst other things, the threat of "influencer marketing", and the rise of Google's web analytics... They've often been forced to acquire big data technology at high prices, putting cash flow and profitability under pressure, to stay in the game and carve-up a new role for themselves in a world where traditional advertising had practically been declared brain-dead.

However, they might be in a much more attractive position going forward:

For a start, market research and analytics have always been at the core of their business. They have accumulated data for decades through old-fashioned panels and surveys before adding a digital layer to their expertise. As such, they are very well placed to support businesses in defining and targeting the right audience for their campaigns. If WPP chose to sell Kantar to Bain Capital in July 2019 (in a move to pay down debt and simplify their organisation), they still retain a close partnership with the group and a strategic 40% stake. The same year, Publicis acquired Epsilon for 4.4bn whilst IPG took over data marketing company Acxiom for 2.3bn USD in 2018.

Beyond the realm of pure data, agencies have a crucial role to play in advisory services. IT firms like Accenture may compete with them on the technical aspects of programmatic trading implementation, but they will never offer the benefit and insight associated with deep and long-standing market relationships acquired through many years of advertising activity. At a time when clients are demanding more transparency from their supply chain, this is clearly a strong selling point. Agencies also have a unique understanding of the intricacies of media planning: reaching an audience can quickly turn into toxic spamming if the commercial message is not delivered the right way, at the right moment, and on the right media. Using the right mix of traditional and digital channels is key to the success of a campaign, which is why companies like IPG are now combining their Acxiom and Matterkind franchises to provide data-driven omni-channel buys across all addressable media, including programmatic, OTT and digital out of home...

Finally, an advertiser cannot just rely on a bunch of YouTube influencers to create long-term value for their brand. They might be able to temporarily increase awareness and improve sales with specific audiences in a way that feels genuine to them, but longterm equity is always achieved through superior creativity and communication. In this post-Covid19 world, whether you chose to advertise on Facebook, Instagram, a Sony PS4 or the Washington Post, it is more than ever necessary to engage with your audience in a memorable and remarkable way. It is absolutely essential to bring emotion back to the table and who, better than media agencies, can achieve the impossibly complex mission of bridging the gap between "reaching" and "touching" a customer?



LONDON	PARIS	NEW YORK	
Cannon Bridge House	47, Quai d'Austerlitz	1251 Avenue of the Americas	
25 Dowgate Hill	75013 Paris	New York, NY 10020	
London EC4R 2YA, UK	France	USA	
MADRID	FRANKFURT	MILAN	MOSCOW
Calle Serrano 90	Im Trutz Frankfurt 55	Via Borgogna, 8	Tsvetnoi boulevard, bld 2
Planta 5, Madrid	60322 Frankfurt	20122 Milano	Entrance C - 4 th floor
28006, Spain	Germany	Italy	127051 Moscow, Russia
DUBAI	HONG KONG	TOKYO	SINGAPORE
DIFC Gate Village # 8	ICC Level 72	Ark Hills South Tower 8/F	5 Shenton Way
Level 5, P.O. Box 506694	1 Austin Road West	1-4-5 Roppongi	#22-01 UIC Building
Dubai, U.A.E.	Kowloon, Hong Kong	Minato-ku, Tokyo 106-0032	068808 Singapore

DISCLAIMER

This document is for discussion and information purposes only. It is highly confidential and it is the property of Natixis It should not be transmitted to any person other than the original addresse(s) without the prior written consent of Natixis. This document is a marketing presentation. It does not constitute an independent investment research and has not been prepared in accordance with the legal requirements designed to promote the independence of investment research. Accordingly there are no prohibitions on dealing albed of its dissemination. The distribution, possession or delivery of this document in to or from any jurisdiction. This document is only addressed to investment Professionals as set out in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or to persons regarded as professional investors under equivalent legislation under a jurisdiction of the European Economic Area. This document is not for distribution to retail client. This document is not products or services described herein do not described in this document objective, financial situation or particular need of any recipient. It should not be considered beach recipient for information purposes only and does not constitute a personalised recommendation. It is intended for general distribution and the products or services described herein do not described in this document should be treated as preliminary only and is subject to a formal approval and written confirmation in accordance with Natixis current thereal products. Natixis has neither verified nor independently analysed the information contained in this document to a so the reasonableness or valuation models. Prices and margins are deemed to be information contained in this document account specific tax rules or accounting methods applicable to counterparties, clients or potential clients of Natixis Sharefore. Natixis share in the describent on a value the endogendent and the presons or any of their persons or any other seconding th

Natixis is authorised in France by the Autorite de controle prudentiel et de résolution (ACPR) as a Bank – Investment Services Provider and subject to its supervision. Natixis is regulated by the AMF in respect of its investment services activities. In the UK: Natixis is authorised by the Autorité de Contrôle Prudentiel et de résolution (ACPR) and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our regulation by the Financial Conduct Authority are available from us on request. Natixis is authorised by the ACPR and regulated by the ACPR and regulated by the ACPR and regulated by Bank of Spain and the CNMV for the conduct of its business under the right of establishment in Germany. Natixis is authorised by the ACPR and regulated by Bank of Italy and the CONSOB (Commissione Nazionale per le Società e la Borsa) for the conduct of its business under the right of establishment in right of establishment in Italy. Natixis is authorised by the ACPR and regulated by and the CONSOB (Commissione Nazionale per le Società e la Borsa) for the conduct of its business under the right of establishment in Italy. Natixis is authorised by the ACPR and regulated by the ACPR and regulated

In compliance with Market Abuse Regulation that came into force on 3 July 2016, please find relevant information regarding investment recommendations. This document is published outside Financial Research Department. However, as staff member of Natixis, the producer of the document may be considered as author of an investment recommendation. Information about potential conflicts of interest within Natixis/BPCE Group: https://www.natixis.com/natixis/jcms/lqaz5_7818/fr/directive-mif-/-politique-natixis Policy for managing conflicts of interest: <a href="https://www.natixis.com/nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-natixis.com/nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_7818/fr/directive-mif-/-politique-nativis/jcms/lqaz5_78



Equity Solutions Cannon Bridge House 25 Dowgate Hill London EC4R 2YA, UK www.natixis.com

