

Before the  
BUREAU OF CONSUMER FINANCIAL PROTECTION  
Washington, DC 20554

In response to the Request for Information Regarding Data Brokers and Other Business  
Practices Involving the Collection and Sale of Consumer Information  
Docket No. CFPB-2023-0020

Comments of

U.S. Public Interest Research Group (PIRG) and  
Center for Digital Democracy (CDD)

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# Executive Summary

The U.S. Public Interest Research Group (USPIRG) and the Center for Digital Democracy (CDD) are pleased to provide the CFPB (Bureau) information it requested on the contemporary data broker marketplace in the U.S. Over the last several decades, our organizations have [closely worked together](#) to raise consumer and privacy protection concerns regarding the operations of data brokers, including the role of the Fair Credit Reporting Act (FCRA) before policymakers, regulators and the news media.

There is a huge market for consumer financial data - both explicit measures, like an individual's salary or investments, and implied measures, like using an individual's search history or zip code to infer their financial situation. With prevalent consumer profiling practices, almost every piece of data collected about consumers can be used to paint a picture of their financial behavior, including mental health data.

All of the data collected on consumers can be used for a number of purposes that have impacts on their financial health. This includes the targeting of offers for financial services; the identification of victims for financial scams and predatory debt products; and the influence of consumer purchase patterns and level of indebtedness.

With such high demand for consumer financial data, virtually every commercial entity has become a data broker, using its first party data to profile and target consumers. Most of the firms and their monetization and use of consumer financial data are entirely unregulated.

New technologies are continuing to emerge to facilitate the collection, exchange and use of consumers' personal data. These include data-sharing "solutions" such as the use of cloud-based data clean rooms, advanced modeling for "identity resolution" and the implementation of AI to mine data sets for new insights into consumer financial behavior.

For consumers, the process of identifying data brokers that hold their data is nearly impossible. Submitting requests to access, correct or delete data from even major data brokers is often limited to residents of the few states with data privacy laws. This comment includes a study of the access, correct and deletion processes 32 data brokers, and finds the current systems almost entirely unusable.

All of these practices put consumers' financial health at risk. This warrants significant regulatory action. FCRA is an appropriate tool to use to rein in data sharing practices that have come to underlie much of the economy. The Bureau should adopt rules that make accountable all companies collecting, sharing, selling and providing access to consumer data used for financial services.

This comment speaks directly to question numbers 1, 2, 6, 12, 13, 15, 20 and 22 of the market-level inquiry, as well as question 4 of individual level inquiry.

# Introduction

Today, data brokers operate in a myriad of ways different from their historical past—they are multi-purpose enterprises providing a wealth of resources to advance digital marketing; the analysis of consumer behaviors through information sharing partnerships and direct services; and as a key method used to “activate” a consumer’s behavior such as fostering opt-in and consent, among other practices. The Bureau should adopt rules that make accountable all companies collecting, sharing, selling and providing access to consumer data used for financial services.

The number of companies engaged in the selling or monetization of consumer data has grown significantly in the last decade. Nearly every leading company is a data broker of some form - harvesting online and offline information; sharing data insights with partners; and operating “Big Data” technologies to analyze and actualize data for consumer targeting and other business objectives. Today’s consumer data services marketplace includes not only credit reporting agencies, but consumer-facing companies<sup>1</sup>, data providers (offering “first, second or third party”), data aggregators, data integrators, data marketing “clouds,” the dominant platforms and others.

Since the U.S. does not have a federal privacy law operating that would have limited the role of data brokers and online media, there have been no real limits on its operations. There is far-reaching collection, analysis, profiling and targeting operating continuously, placing consumers at the mercy of commercial data scientists and online advertising companies.

Commercial “surveillance” of individuals and groups of consumers, as well as communities, involving offline and online sources is conducted on a regular basis, reflecting how the Internet and digital media infrastructure has transformed the operations of the financial, retail, entertainment and other key sectors. The mass and routinized harvesting of consumer data is one of the country’s most ambitious - and successful - enterprises.

This is especially a crucial time to develop rules to regulate the data-driven online financial marketplace, given the growing harvesting of so-called “first-party” data as well as new methods used to analyze it, including AI predictive analytics and so-called “clean rooms.” The combination of vast data collection via all our digitally connected services, predictive analytics, sophisticated online marketing techniques, testing, real-time measurement, along with dominant

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<sup>1</sup> R.J. Cross, “The new data brokers: retailers, rewards apps, & streaming services are selling your data,” *U.S. PIRG*, 19 August 2022, Available at: <https://pirg.org/articles/the-new-data-brokers-retailers-rewards-apps-streaming-services-are-selling-your-data/>

and interlinked commercial data entities, currently make it impossible for a consumer to escape from a series of unfair and manipulative practices.

U.S. PIRG and Center for Digital Democracy appreciate the opportunity to support the CFPB in its important inquiry.

## Data brokers collect financial information about consumers

*This section addresses questions 1 and 2. It reviews the types of information traditional data brokers collect about consumers and where this data comes from.*

The term data brokers has historically been used to describe companies that specialize in the harvesting, combination, analysis, and sale of data about consumers. Amongst the major players in the space, it appears nearly no American is untouched. For example:

- The Nielsen Company, a large information, data and measurement firm, claims to have behavioral data “covering 90% of the U.S. population”.<sup>2</sup>
- The computer technology company Oracle’s Oracle Data Marketplace - “the world’s largest third-party data marketplace”, according to its materials - advertises that clients can “access actionable audience data on more than 300 million users. That’s over 80% of the entire US internet population at your fingertips.”<sup>3</sup>
- The health-focused AdTech company PulsePoint - owned by the same parent company that owns WebMD - claims to “see 91% of the US population”.<sup>4</sup>
- The data broker Epsilon claims to have 200 million consumer profiles “anchored in deterministic transactional data and built from years of historical and real-time data across more than 7,000 attributes.”<sup>5</sup>
- According to a 2021 industry report on data privacy and financial app usage, “one data aggregator alone stores the banking data of 25% of U.S. bank accounts (more than the top two U.S. banks combined).”<sup>6</sup>

Data brokers gather a lot of information about consumers in order to gauge their financial situation. This can include direct information, like a person’s salary, or inferred information, like someone’s web searches or what zip code they live in. With the vast number of data sources companies have at their fingertips, and the widespread practice of building profiles of

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<sup>2</sup> “Audience Segments” (*webpage*), Nielsen, archived on 8 November 2022 at:

<https://web.archive.org/web/20221108213655/https://www.nielsen.com/solutions/media-planning/audience-segments/>

<sup>3</sup> “Oracle Data Marketplace” (*webpage*), Oracle, available at:

<https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/Help/AudienceDataMarketplace/AudienceDataMarketplace.html>. (If needed, screenshot of this source available upon request.)

<sup>4</sup> “Platforms - Know Where and How to Activate Your Audience the Exact Moment Intent is Signaled” (*webpage*), PulsePoint, archived on 20 September 2022 at

<https://web.archive.org/web/20220920150638/https://www.pulsepoint.com/healthcare-marketing-activation/>.

<sup>5</sup> “Epsilon Study Finds Marketers Disappointed, Frustrated and Overwhelmed Ahead of Third-Party Cookie Deprecation” (*press release*), Epsilon, 27 October 2020,

<https://www.epsilon.com/us/about-us/pressroom/epsilon-study-finds-marketers-disappointed-frustrated-and-overwhelmed-ahead-of-third-party-cookie-deprecation>

<sup>6</sup> 2021 Consumer Survey: Data Privacy and Financial App Usage, The Clearing House, December 2021, available at:

[https://www.theclearinghouse.org/-/media/New/TCH/Documents/Data-Privacy/2021-TCH-ConsumerSurveyReport\\_Final](https://www.theclearinghouse.org/-/media/New/TCH/Documents/Data-Privacy/2021-TCH-ConsumerSurveyReport_Final).

consumers with “360° views”<sup>7</sup> that contain as much data as possible, almost any piece of data about a consumer can be used to understand their financial situation or financial behavior.

**Some common sources of data that data brokers use to collect information include:**

- The United States Census<sup>8</sup>
- Registration and warranty information<sup>9</sup>
- Online surveys, including in exchange for entry into a sweepstakes<sup>10</sup>
- Ad clicks<sup>11</sup>
- Cookies, software development kits and web beacons embedded in the background of apps and websites<sup>12</sup>
- Social integrations tracking likes, comments, posts and other “interest signals”<sup>13</sup>
- Location data harvested from smartphones over beacon, Wi-Fi and GPS signals<sup>14</sup>
- Retail loyalty card programs<sup>15</sup>
- Information entered on online calculators<sup>16</sup>
- Real-time television viewing data from firms such as TiVo and other “smart” TVs<sup>17</sup>
- Information inputted in CAPTCHAs<sup>18</sup>

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<sup>7</sup> This is common language found on many data platforms. For example, Mastercard’s Data & Services division - which monetizes its cardholder’s transaction data for secondary uses - advertises that its “Intelligent Targeting” solution includes the “Mastercard 360° data insights”. See: <https://web.archive.org/web/20230713151801/https://www.mastercardservices.com/en/intelligent-targeting>. Archived 13 July 2023.

See also Equifax’s “Income360” product, which allows the enhancement of income targeting with more complete financial behavior data. See: <https://www.equifax.com/business/product/income360/>.

<sup>8</sup> “Retail audience segments,” *Oracle*, Archived 12 July 2023: <https://web.archive.org/web/20230712161749/https://www.oracle.com/cx/advertising/audiences/retail/>

<sup>9</sup> Ibid.

<sup>10</sup> “Oracle Cloud Data Platform: User Guide,” *Oracle*, Archived 12 July 2023: [https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle\\_Data\\_Cloud\\_Platform\\_User\\_Guide.pdf](https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle_Data_Cloud_Platform_User_Guide.pdf)

<sup>11</sup> “Value Wizard - Underserved No Checking Accounts with Postal and Email Addresses Mailing List,” *NextMark*, Archived 12 July 2023: <https://web.archive.org/web/20230712164129/https://lists.nextmark.com/market.jsessionid=F17DBB539560EA79A8A1E482AE8BDEE7?page=order/online/datacard&id=417897>

<sup>12</sup> R.J. Cross, “Should I hit “accept” on cookie pop-ups?” *U.S. PIRG*, 22 February 2023, Available at: <https://pirg.org/articles/cookie-pop-ups-why-you-should-think-twice-hitting-accept/>

<sup>13</sup> “Oracle Cloud Data Platform: User Guide,” *Oracle*, Archived 12 July 2023: [https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle\\_Data\\_Cloud\\_Platform\\_User\\_Guide.pdf](https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle_Data_Cloud_Platform_User_Guide.pdf)

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Ed Mierzwinski and Jeff Chester, “Selling Consumers Not Lists: The New World of Digital Decision-Making and the Role of the Fair Credit Reporting Act”, *Suffolk University Law Review*, 1 February 2014. Available at: [https://cpb-us-e1.wpmucdn.com/sites.suffolk.edu/dist/3/1172/files/2014/01/Mierzwinski-Chester\\_Lead.pdf](https://cpb-us-e1.wpmucdn.com/sites.suffolk.edu/dist/3/1172/files/2014/01/Mierzwinski-Chester_Lead.pdf)

<sup>17</sup> See note 13.

<sup>18</sup> Ibid. - See “Solve Media”

- Directly from websites, such as Evite<sup>19</sup>
- Credit card transactions<sup>20</sup>

Some pieces of information are explicitly financial and are obtained from financial institutions. For example, Equifax's IXI claims that it can "directly measure about \$27.5 trillion in anonymous U.S. consumer assets and investments, representing about 45% of all U.S. consumer assets". It gets its information from 95 financial institutions, including insurance firms, mutual fund groups and full service and discount brokers. Though the data may be technically "anonymous", even anonymized data can be used to target consumers with individualized messages. IXI advertises that firms can use its data to "[s]egment and target U.S. investors and consumers by measures of assets, income, spending, and credit" to "deliver the right offer with the right message to the right customer."<sup>21</sup>

While the data broker industry is changing rapidly, some of the historical data broker models continue today. Brokers use tactics like online surveys to gather consumer information. Others use ad clicks to identify people with particular interests that can be exploited. Many lists available on the data brokerage site NextMark, for example, have used these tactics in order to build lists of target consumers.

Some of the lists on NextMark describe lists of underserved consumers with no checking accounts as "100% direct response, consisting of consumers who recently responded to an online promotion."<sup>22</sup> One list of individuals seeking mortgage relief contains the information of mortgage holders who "have all called an 800 number offering relief to foreclosures and debt problems associated with their mortgages."<sup>23</sup> Finally, the "Suffering Seniors" list is "made up of

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<sup>19</sup> Evite sells insights about people's life-stage events like weddings and graduations, as well as the fact they may be in the market for party supplies or gifts - both among hosts and confirmed guests "Oracle Cloud Data Platform: User Guide," *Oracle*, Archived 12 July 2023: [https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle\\_Data\\_Cloud\\_Platform\\_User\\_Guide.pdf](https://web.archive.org/web/20230712163649/https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/pdf/Oracle_Data_Cloud_Platform_User_Guide.pdf)

<sup>20</sup> "Data-Driven Decision Making Tools for Organizations," *Mastercard*, Archived 13 July 2023: <https://web.archive.org/web/20230713162445/https://www.mastercardservices.com/en/solutions/data-strategy-analytics>

<sup>21</sup> "Foundation of IXI data solutions," *Equifax*, Archived 12 July 2023: <https://web.archive.org/web/20230712152001/https://assets.equifax.com/marketing/US/assets/the-foundation-of-ixi-data-brochure.pdf>

<sup>22</sup> "Value Wizard - Underserved No Checking Accounts with Postal and Email Addresses Mailing List," *NextMark*, Archived 12 July 2023: <https://web.archive.org/web/20230712164129/https://lists.nextmark.com/market;jsessionid=F17DBB539560EA79A8A1E482AE8BDEE7?page=order/online/datacard&id=417897>

<sup>23</sup> "INFOMORTGAGE - MORTGAGE RELIEF RESPONDERS Mailing List," *NextMark*, Archived 12 July 2023: <https://web.archive.org/web/20230712165532/https://lists.nextmark.com/market;jsessionid=C2E56D5D1C536B0B8323B66A790D4ACD?page=order/online/datacard&id=238821>

mail responsive seniors who provide permission-based data about their medical needs, their families, and themselves by filling out household surveys.”<sup>24</sup>

Some data brokers specialize in financial distress signals. For example, additional lists available on NextMark include individuals who have filed for bankruptcy, carry a significant amount of unsecured credit card debt, or have a history of late payments on utility bills.

**Table 1. Examples of financial-related lists available for purchase on NextMark<sup>25</sup>**

Bad Credit - Card Declines
Bankrupt Homeowners
Bankruptcy Filers
Cash Cows - Underbanked File
Credit Cravers - Consumers by Credit Score
Debt Consolidation Seekers
Debt Relief - Debt Settlement File
Fresh Credit - New Loan Borrowers
Get me out of Debt! - In Debt Consumers
Improve My Score - Low Credit Rating Consumers
Mortgage Relief Responders
My First Credit Card - Newly Issued Credit Cards
Paycheck to Paycheck Consumers
Payday Loan Real Time Responder Leads
People Struggling with Bills
People with Student Loans
Suffering Seniors
Sure Bettors: Gamblers
Underbanked Consumers
Underserved No Checking Accounts

<sup>24</sup> “SUFFERING SENIORS Mailing List,” *NextMark*, Archived 12 July 2023: <https://web.archive.org/web/20230712165805/https://lists.nextmark.com/market.jsessionid=372AD1C0DD83138C33F5BB4682279964?page=order/online/datacard&id=140992>

<sup>25</sup> Lists available as of July 2023 from <https://www.nextmark.com/>.

## Data about consumer's finances is used in ways that have implications for consumers' financial health.

Consumer financial information is used in the identification of victims for financial scams and predatory debt products.

There is robust evidence that some data brokers are in the business of supplying consumer lists for the targeting of financial scams and predatory debt products. The information used to compile these lists includes both explicit and implied signals about consumer financial behavior, and even health data.

Data brokers also often use signals about a consumer's finances to categorize consumers into easy-to-target buckets made widely available to many entities. A Senate Commerce report from 2014 found some tags that data brokers use to target the financially vulnerable, such as "Rural and Barely Making It" "Ethnic Second-City Strugglers" and "Living on Loans: Young Urban Single Parents".<sup>26</sup> These practices may allow for the marketing of legitimate financial products, but there's no question that at least some data brokers are in the business of supplying lists to scammers hoping to take financial advantage of vulnerable individuals.

For example, in 2020 and 2021, the U.S. Department of Justice took action against three major data brokers for knowingly assisting scammers in identifying ideal victims for direct mailer schemes. In all three cases - *U.S.A v. Epsilon Data Management*<sup>27</sup>, *U.S.A v. Macromark*<sup>28</sup>, and *U.S.A v. KBM Group*<sup>29</sup> - the firms were charged with Conspiracy to Commit Mail and Wire Fraud.

The scams went like this: send a mailer saying the victim had won a prize, such as thousands of dollars in a fake sweepstakes that could be claimed by paying a fee. The mailers were sent to people identified by these data brokers as most likely to fall for it, and their lists were largely made up of the elderly or cognitively impaired, including individuals with Alzheimer's.<sup>30</sup> If someone responded to a scam once, they were likely to respond to a scam again. And so brokers contracting with new scamming companies running new schemes used the same victims, over and over again. These brokers also used the data on who fell for it to create

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<sup>26</sup> "A Review of the Data Broker Industry: Collection, Use, and Sale of Consumer Data for Marketing Purpose," *United States Senate Committee on Commerce, Science, and Transportation: Office of Oversight and Investigations Majority Staff*, 18 December 2013, Available at:

<https://www.commerce.senate.gov/services/files/0d2b3642-6221-4888-a631-08f2f255b577>

<sup>27</sup> *U.S.A v. Epsilon Data Management*, U.S. Department of Justice, available at:

<https://www.justice.gov/opa/press-release/file/1360881/download>

<sup>28</sup> *U.S.A. v. Macromark, Inc.*, U.S. Department of Justice, available at:

<https://www.justice.gov/civil/case/file/1326376/download>

<sup>29</sup> *U.S.A v. KBM Group, LLC*, U.S. Department of Justice, available at:

<https://www.justice.gov/civil/case/file/1404091/download>

<sup>30</sup> Direct evidence for Alzheimer's victims is found in *U.S.A. v. Macromark, Inc.*

models to find new additional ideal victims, putting even more people at risk than the initial targets.<sup>31</sup>

The brokers engaged in these schemes were not small, fly-by-night actors; they were large and well-established companies. The court filing against Epsilon identified the broker as “one of the largest marketing companies in the world”; it supplied data on over 30 million Americans to scamming companies alone.<sup>32</sup> KBM Group is reported to have databases containing data on more than 100 million U.S. households, and at any given time serves at least 2,500 client companies.<sup>33</sup>

In another example, descriptions of many of the lists currently available on NextMark illustrate that these lists can be used to target vulnerable American consumers. The compilation of these lists supplies scammers with the tools they need to reach victims efficiently and at scale.

For instance, NextMark describes the Suffering Seniors mailing list as “the perfect list for mailers targeting the ailing elderly who will be most responsive to their direct mail campaigns” - troubling given the scams that have targeted the elderly with cognitive disabilities.<sup>34</sup> In other lists, low credit rating consumers are marketed as “ideal candidates for offers,”<sup>35</sup> individuals who have newly issued credit cards are classified as “younger and ... relatively inexperienced when it comes to building credit,”<sup>36</sup> and underbanked consumers are categorized as “prime prospects for check cashing and payday loan services along with many other products & services to meet their needs.”<sup>37</sup> Finally, NextMark describes paycheck to paycheck consumers as “folks ... at a financially existential position. Barely able to make ends meet, they are in need of any kind of a safety net. Great for Catalog Credit, low cost insurance, prepaid cellular service, and financial counseling.”<sup>38</sup>

The brokers involved with NextMark make easily available data on economically vulnerable individuals, identifying them as prime targets for financial products and services. Given the lack

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<sup>31</sup> Alistair Simmons and Justin Sherman, “Data Brokers, Elder Fraud, and Justice Department Investigations”, *LawFare*, 25 July 2022. Available at: <https://www.lawfareblog.com/data-brokers-elder-fraud-and-justice-department-investigations>

<sup>32</sup> See note 27.

<sup>33</sup> See note 29.

<sup>34</sup> See note 24,

<sup>35</sup> “Improve My Score - Low Credit Rating Consumers Email/Postal/Phone Mailing List,” *NextMark*, Archived 13 July 2023:

<https://web.archive.org/web/20230713163504/https://lists.nextmark.com/market;jsessionid=4B2AD32608568F051762D3D0DDB55971?page=order/online/datacard&id=352300>

<sup>36</sup> “My First Credit Card - Newly Issued Credit Cards Email/Postal/Phone Mailing List,” *NextMark*, Archived 13 July 2023:

<https://web.archive.org/web/20230713163829/https://lists.nextmark.com/market;jsessionid=925FC810583093C7DFA1F07E53BF0881?page=order/online/datacard&id=352550>

<sup>37</sup> “Cash Cows - Underbanked File Mailing List,” *NextMark*, Archived 12 July 2023:

<https://web.archive.org/web/20230712170441/https://lists.nextmark.com/market;jsessionid=D0B963FEFC AF54612294ADA0EB83C31A?page=order/online/datacard&id=463991>

<sup>38</sup> “A LIST of Paycheck to Paycheck Consumers Mailing List,” *NextMark*, Archived 12 July 2023:

<https://web.archive.org/web/20230712170659/https://lists.nextmark.com/market;jsessionid=86C5A53CB4976B5DC7A7B73165806E13?page=order/online/datacard&id=521029>

of oversight of the industry, these lists are as easily leveraged for predatory financial schemes as they are for more legitimate financial products.

The major tech platforms assist in scammers finding ideal victims for predatory financial products and scams

Scammers and predatory financial industries have always existed – but the big data system underpinning today’s internet has allowed them an unprecedented ability to identify, reach and take advantage of their victims.

In some cases, predatory operations have relied on the data collection and ad delivery systems of major tech platforms. Virtually any data gathered by the major platforms can be used to market both legitimate and illegitimate financial products.

A consumer’s search history can reveal a lot about their financial situation or weaknesses. Reports include people searching terms like “need money help” on Google being served ads for predatory loans with staggering interest rates over 1,700%.<sup>39</sup> An online casino targeted ads using Google’s search data to offer free spins to people struggling with gambling addictions seeking help.<sup>40</sup>

Social media activity can reveal a lot, too. A precious metals scam used highly targeted Facebook ads to get elderly seniors likely to be suspicious of institutions to spend their retirement savings on grossly overpriced gold and silver coins. This scam used Facebook’s data about page membership to target the ads to likely victims.<sup>41</sup>

The sheer scale of the platforms means such financial scams can reach millions of victims in short order. For example, Facebook showed ads associated with the precious metal scheme at least 45 million times before being removed from the platform.<sup>42</sup>

Consumer financial information is used in the targeting of offers for financial services.

Financial marketers use the data economy to market their products. The models used to select what consumers will see what offers are incredibly opaque, integrating lots of disparate information collected from any number of sources. Some targeting is even based on the inputs

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<sup>39</sup> Shanti Das, “Google profiting from ‘predatory’ loan adverts promising instant cash”, *The Guardian*, 12 March 2022. Available at: <https://www.theguardian.com/technology/2022/mar/13/google-profiting-from-predatory-loan-adverts-promising-instant-cash>

<sup>40</sup> Rob Davies, “Online casino advert banned for targeting problem gamblers”, *The Guardian*, 9 October 2019. Available at: <https://www.theguardian.com/society/2019/oct/09/casumo-ad-banned-for-targeting-people-trying-to-stop-gambling>

<sup>41</sup> Jeremy B. Merrill, “How Facebook fueled a precious-metal scheme targeting older conservatives” *Quartz*, 19 November 2019. Available at: <https://www.yahoo.com/video/facebook-fueled-precious-metal-scheme-110044886.html>

<sup>42</sup> Ibid.

of *other* individual consumers' data, as in the case of lookalike audiences. The incredibly complicated and technological tools that facilitate the targeting of ads for financial products makes it difficult for consumers, regulators, and even the companies in the data and ad delivery businesses themselves<sup>43</sup>, to fully explain or understand why many targeting decisions have been made.

Beyond concerns of pre-screening, some of the financial products advertised may not be good for consumers' finances. For example, some financial product marketers have relied on lead generation - a deceptive online activity using a web submission form or portal to collect information from individuals expecting to get one online service, not realizing their data is being transmitted to other actors that will use it in call centers or targeted advertising campaigns. Lead gen operations can be predatory in nature, used for peddling unwise investments. Payday lenders, for example, have used online lead gen tools to target ads at vulnerable consumers, even in states where payday loans are illegal.<sup>44</sup> Lead gen services also contributed to the 2008 mortgage market crisis, identifying candidates for subprime loans and targeting them with ads for mortgages and refinancing.<sup>45</sup>

Targeting for less explicitly predatory financial services is prevalent, too. With the immense amount of financial data available about consumers, the marketing of financial products is a longstanding and robust sector of the AdTech industry. For decades, financial services has been a key focus of online advertising and marketing - identified as a major "vertical" revenue center by the Interactive Advertising Bureau's annual expenditure reports.<sup>46</sup>

One example is the AdTech identity graph firm Claritas which has its own audience tool for financial marketers called P\$CYCLE services and advertises its services as such:

"Drawing on financial transactions data as well as the most comprehensive survey of financial behavior, you'll know more about people's financial lives including loans, credit cards, mortgages, insurance policies, 401Ks, online banking behavior, account balances and more. You'll be better able to predict financial behaviors with 60 precisely defined segments."<sup>47</sup>

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<sup>43</sup> It's telling that even Facebook and Twitter's own engineers have testified that even internally it is nearly impossible for the companies to sort through all of the data that has been transmitted to their "data lakes". See: R.J. Cross, "Do you know where your data is? Because Facebook doesn't", U.S. PIRG, 15 September 2022 at <https://pirg.org/articles/do-you-know-where-your-data-is-because-facebook-doesnt/>.

<sup>44</sup> Upturn, *Led Astray: Online Lead Generation and Payday Loans*, October 2015, available at: [https://www.upturn.org/static/reports/2015/led-astray/files/Upturn\\_-\\_Led\\_Astray\\_v.1.01.pdf](https://www.upturn.org/static/reports/2015/led-astray/files/Upturn_-_Led_Astray_v.1.01.pdf)

<sup>45</sup> See note 16.

<sup>46</sup> See for example: "IAB U.S. 2020 Digital Video Advertising Spend Report: Putting Covid in Context," IAB, Published June 2020, Archived 12 July 2023: [https://web.archive.org/web/20230712145917/https://www.iab.com/wp-content/uploads/2020/06/IAB\\_2020VideoAdSpend\\_FINAL.pdf](https://web.archive.org/web/20230712145917/https://www.iab.com/wp-content/uploads/2020/06/IAB_2020VideoAdSpend_FINAL.pdf)

<sup>47</sup> "P\$YCLE Premier" (*webpage*), Claritas, available at: [https://claritas.com/psycle-premier/?st-t=PPC&qclid=Ci0KCQjwkOqZBhDNARIsAACsbflHHydKQqpHU7j3AUmDkug5ZhPHwlo0zj9fOk6RxbcY86PdsE1Tt5gaAmNIEALw\\_wcB](https://claritas.com/psycle-premier/?st-t=PPC&qclid=Ci0KCQjwkOqZBhDNARIsAACsbflHHydKQqpHU7j3AUmDkug5ZhPHwlo0zj9fOk6RxbcY86PdsE1Tt5gaAmNIEALw_wcB)

Traditional financial entities have certainly engaged in using consumer data for the targeting of products. Ads for Goldman Sachs' consumer loan platform, for example, have been targeted to Americans with more than \$10,000 in credit card debt.<sup>48</sup>

Newer financial startups in particular are capitalizing on data-driven marketing. Digital marketing by Finserv companies is expected to exceed \$30 billion annually by 2023.<sup>49</sup>

The major platforms use their data to target ads for financial products

As the Bureau is aware, consumer-facing financial services marketplaces have been significantly transformed by the commercial dimensions of the Internet and other contemporary digital media. Data brokers and data-focused online platforms, such as Meta, Google, TikTok and Amazon, serve as the essential digital infrastructure, facilitating the collection, analysis and use of consumer data for continuous tracking, profiling and targeting of individuals and groups. Using the full power of data-driven marketing to drive critical financial decisions by consumers is a core part of the advertising offerings of Amazon, Meta, Google, and TikTok.

For example, Amazon shares streaming and shopping data with financial services marketers.<sup>50</sup> Meta offers firms the ability to “amplify your financial services advertising with Meta” by “connect[ing] with customers through financial literacy content.”<sup>51</sup> Google is continuing to update the “lead gen” model by focusing “intent signals from Google properties” like using someone’s search terms to identify consumers marketers can reach with appeals for financial products like car insurance.<sup>52</sup> TikTok too offers options for lead generation, and ad offerings for financial products including FinTech companies.<sup>53</sup> These will be spaces the Bureau should monitor.

Marketing of financial products online should fall under FCRA

In the new frontier of Internet decision-making, digital scores (including online profiles) can be used to serve ads and drive transactions. In the authors’ view, the bright line that once separated such advertising and transactions subject to the FCRA is blurred. One reason is that

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<sup>48</sup> Portia Crowe, “DEBT HAPPENS’: Goldman Sachs just ran its first-ever ads trying to sell you something”, *Business Insider*, 17 November 2016. Available at:

<https://www.businessinsider.com/goldman-sachs-marcus-ads-2016-11>

<sup>49</sup> Sara Lebow, “US banks and insurance companies slow down ad spending to compete with fintechs,” *Insider Intelligence*, 4 August 2021. Available at:

<https://www.insiderintelligence.com/content/us-banks-insurance-companies-compete-with-fintechs>

<sup>50</sup> Theresa Yerger, “How-to reach FinServ audiences in today’s competitive content landscape” (*blog*), Amazon Ads, 24 March 2022. Available at:

<https://advertising.amazon.com/blog/reaching-finserv-audiences-in-2022>

<sup>51</sup> “Finance Advertising: Ads Solution for Financial Services,” *Meta*, Accessed 12 July 2023, Available at:

<https://www.facebook.com/business/industries/financial-services>

<sup>52</sup> “Marketing Strategies,” *Google*, Archived 12 July 2023:

<https://web.archive.org/web/20230712160937/https://www.thinkwithgoogle.com/marketing-strategies/search/the-update-fundamentals-of-marketing-leads/>

<sup>53</sup> “TikTok for Business,” *TikTok*, Archived 12 July 2023:

<https://web.archive.org/web/20230712161553/https://www.tiktok.com/business/en/inspiration?industry=Financial%20services>

the marketing lists are based on massive amounts of financial information. Such information is integrated with a wide range of other data measures, helping make these profiles compiled and maintained by data brokers more specific to an individual consumer. These profiles allow financial companies to evaluate the rewards and risks in providing financial products to particular consumers, and then to “micro-target” them.

In our [2014 Suffolk Law paper](#), U.S. PIRG and CDD outlined key questions for both the CFPB and FTC to consider regarding the regulation of the new internet economy:

- At what point does an Internet profile or consumer dossier that contains information bearing on any one of the FCRA’s 7 factors, from “credit worthiness” to “mode of living” make a profile into a “consumer report” if it is compiled to serve as a “factor in establishing the consumer’s eligibility for ... credit ... ?”
- At what point does the collection and sale or sharing of those dossiers make a firm a “consumer reporting agency?”
- When does a decision derived from that profile on **servicing an ad** tied to a financial offer to a consumer become an **offer based on a decision affecting a “consumer’s eligibility for credit”** (or insurance or employment)?
- When does such a decision selecting some consumers for different higher- or lower-cost or more or less desirable products become an “adverse action” or a “risk-based pricing” selection subject to the FCRA?
- Where is the line between a score calculated simply to serve a targeted ad and a score used to determine a consumer’s eligibility for credit?

These remain questions regulators should seek to answer.

Consumer financial information is used to the influence of consumer purchase patterns and level of indebtedness.

There should be no doubt that the ever-increasing granularity of data gathered, analyzed and directed towards a consumer to facilitate a transaction (whether credit offering, a sale, or other financially connected function) is at historic levels. The centrality of the data gathering and use functions of the online economy - involving social media platforms, mobile phones, ecommerce services and countless digital payment and financial services - has created a tsunami of personal and other information constantly flowing into the servers, consumer data platforms<sup>54</sup> and networks of countless Internet-facing enterprises. Much of it is deployed in the service of encouraging consumers to spend more money - regardless if it makes financial sense for any given individual to do so.

Much focus is given to collecting and using data about consumer’s financial behaviors, like fine-grained information about what a consumer has purchased previously and under what

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<sup>54</sup> For examples, see: <https://www.gartner.com/reviews/market/customer-data-platforms>.

conditions. As the broker Oracle puts it on its site: “There is no better predictor of future behavior than how a consumer has spent money in the past.”<sup>55</sup>

The avalanche of information has enabled financial service companies to leverage so-called “lifetime value” (LTV) data to sell more products, including to low-income consumers. LTV strategies today involve the use of data to develop a “consolidated profile” of a person, including their demographics, media consumption, product purchasing and “their triggers, such as at what behavior led to them procuring high value products.”<sup>56</sup> Financial companies can take advantage of the “profiles and triggers that predict high-value customers [and use] these in their audience strategies to target low-value customers...”

### Digital wallets

The role of digital payment services, “e-wallets,” and mobile app-connected credit offers, such as BNPL, is facilitating a “closed loop” data-enabled experience that poses additional risks to consumers who are already saddled with too much debt. For example, a recent report on “What’s Working in Financial Services 2023” explained that:

“E-wallets can provide a wealth of data. Every transaction should be considered an insight which illustrates a consumer’s purchase behavior and their digital footprint. In an omnichannel world where online and in-person payments are no longer separated the brand has a single source of consumer data which can be used to create seamless experiences for the consumer...a different approach for each user depending on [their] real-life behavior.”<sup>57</sup>

### Buy Now Pay Later

When it comes to data-driven consumer debt, the CFPB has rightly identified the explosion of Buy Now, Pay Later (BNPL) companies as an area of concern. These on-demand loans granted at the time of purchase are designed, in no small part, to increase the amount of consumer spending, particularly on impulse purchases.<sup>58</sup> Increasingly, these BNPL companies are getting into the data business.

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<sup>55</sup> “Retail audience segments,” *Oracle*, Archived 12 July 2023:

<https://web.archive.org/web/20230712161749/https://www.oracle.com/cx/advertising/audiences/retail/>

<sup>56</sup> Jack Shearing, “Bringing together financial services and customer lifetime value,” *WARC*, Available at: [https://www.warc.com/content/paywall/article/WARC-Exclusive/Bringing\\_together\\_financial\\_services\\_and\\_customer\\_lifetime\\_value/en-GB/141335](https://www.warc.com/content/paywall/article/WARC-Exclusive/Bringing_together_financial_services_and_customer_lifetime_value/en-GB/141335)

<sup>57</sup> “What’s working in financial services in 2023,” *WARC*, Available at:

<https://www.warc.com/content/article/warc-wwi/whats-working-in-financial-services-2023/149484>

<sup>58</sup> R.J. Cross, “What’s wrong with buy now, pay later? The risks of the newest tool to pull you into debt”, U.S. PIRG, 6 January 2022. Available at:

<https://pirg.org/articles/whats-wrong-with-buy-now-pay-later-the-risks-of-the-newest-tool-to-pull-you-into-debt/>

BNPL providers can collect demographic information and data from social media accounts, in addition to data about what consumers are buying and when.<sup>59</sup> In 2021, Afterpay launched a data and analytics platform called Afterpay iQ.<sup>60</sup> Using its 156 million transactions, the platform assigns its users a “persona” that companies can use to “paint a clear data-driven profile of who that customer is, their spend, frequency” and “AOV (average order value)”. This, according to AfterPay, all serves to “provide a deeper understanding of the customer” and “ideas for new channels to target that customer”.<sup>61</sup>

BNPL companies are increasing their targeting capabilities. While the original business model of BNPL companies has involved partnerships with specific retailers, BNPL companies are currently shifting to an app-driven model, where instead of being just the loan provider, they are the marketing medium itself, seeking to recreate the one-stop-shopping experience of the mall. As documented by the Bureau in a report last year, this marks a pivot to a “lead generation business model”. Placement of products inside a BNPL app are designed to “be attractive to the specific app user based on the user’s behavioral surplus: pieces of consumer-provided or consumer-derived data that add value to models that predict the brands and products likeliest to elicit clicks and purchases.”<sup>62</sup>

This raises the risks of increasing data-driven debt. Given the retail sales metrics that BNPL helps drive - including higher shopping cart conversion, higher average order sizes, and increased repeat visits - the CFPB correctly identifies that “BNPL lenders’ use of consumer data for revenue-generating purposes has the potential to increase overextension risks by engendering repeat usage”.<sup>63</sup>

In a letter to Director Chopra, 21 state attorneys general expressed similar concerns about BNPL’s capacity to “push consumers into cycles of debt” and particularly highlighted the concern “when such products are popular among younger consumers unfamiliar with navigating credit products.”<sup>64</sup>

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<sup>59</sup> Wendy Evans, “Buy now, pay later providers move into the data business”, *Choice*, 7 March 2022, available at: <https://www.choice.com.au/consumers-and-data/data-collection-and-use/who-has-your-data/articles/buy-now-pay-later-data-collection>

<sup>60</sup> “BNPL Firm Afterpay Launches Data Platform For Merchants”, *Pymnts*, 19 August 2021. Available at: <https://www.pymnts.com/buy-now-pay-later/2021/bnpl-firm-afterpay-launches-data-platform-for-merchants/>

<sup>61</sup> Nathan Jolly, “AfterPay IQ Brings Behavioral Science to the BNPL Sector”, *ChannelNews*, 22 November 2021, available at: <https://www.channelnews.com.au/afterpay-iq-brings-behavioral-science-to-the-bnpl-sector/>

<sup>62</sup> Consumer Financial Protection Bureau, *Buy Now, Pay Later: Market trends and consumer impacts*, September 2022. Available at: [https://files.consumerfinance.gov/f/documents/cfpb\\_buy-now-pay-later-market-trends-consumer-impacts\\_report\\_2022-09.pdf](https://files.consumerfinance.gov/f/documents/cfpb_buy-now-pay-later-market-trends-consumer-impacts_report_2022-09.pdf)

<sup>63</sup> *Ibid.*

<sup>64</sup> Office of the Attorney General State of Illinois, “Re: Notice and Request for Comment Regarding the CFPB’s Inquiry Into Buy-Now-Pay-Later Providers, Docket No. CFPB-2022-0002; 87 Fed. Reg. 3511” (*letter*), 25 March 2022. Available at: <https://oag.ca.gov/system/files/attachments/press-docs/2022.3.25%20CFPB%20-%20State%20AG%20C>

BNPL is popular with younger consumers, and is heavily publicized on platforms like TikTok.<sup>65</sup> In a post announcing AfterPay's new suite of advertising products inside its app, the BNPL company points out that "these powerful new advertising options are built for brands focused on growing their base of Gen Z and Millennial shoppers." This may have implications for the financial health of young people. The company's Chief Strategy Officer goes on to say that AfterPay Ads can "unleash the power of our ecosystem by giving brands a new way to promote products, collections and offers to Afterpay's highly engaged young audience of shoppers."<sup>66</sup> "Highly engaged" can be another metric for "likely to overspend".

Younger consumers are at a higher risk of accumulating more debt than they can afford and being targeted to buy more.<sup>67</sup> Marketing industry research purports that young people are more likely to make impulse purchases.<sup>68</sup> When paired with marketing on TikTok, this can be problematic. TikTok's internal research found that 41% of Australian users have "discovered something on TikTok and immediately went to buy it" - 1.5 times more likely than other platforms' users.<sup>69</sup>

### Data and impulse buying

Impulse purchases can be dangerous for consumers. By definition, impulse buys are unplanned spending - and more likely done without consideration of one's budget in advance. When highly granular data collection is paired with targeted ads and social media content delivered alongside easy access loans, the potency of impulse buying appeals have never been higher.

Social media, targeted ads, sponsored content and fashion influencers have created a hyper-consumerist environment that can urge people to spend past their limits.<sup>70</sup> Academic

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[comment%20Letter%20on%20BNPL%20Providers%20%282022-0002%2087%20Fed.%20Reg.%203511%29%20.pdf](https://www.regulations.gov/comment/20230713164705/https://www.tiktok.com/business/library/TikTok_ebook_Why_TikTokMadeThemBuyIt.pdf)

<sup>65</sup> Joshua Bote, "'Buy now, pay later' is ascending the TikTok generation spiraling into debt, popularized by San Francisco tech firms", *SF Gate*, 4 May 2022. Available at:

<https://www.sfgate.com/news/article/influencers-lead-Gen-Z-into-debt-17142294.php>

<sup>66</sup> "Introducing Afterpay Ads: Helping Brands Reach, Acquire, and Activate More Customers" (*press release*), AfterPay, available at:

<https://www.afterpay.com/en-US/for-retailers/access/news/introducing-afterpay-ads>.

<sup>67</sup> Comment from Center for Responsible Lending (March 25, 2022), available at

<https://www.regulations.gov/comment/CFPB-2022-0002-0028>

<sup>68</sup> "Impulse Purchases Seen More Common Among Youth", Marketing Charts, 6 September 2022, available at: <https://www.marketingcharts.com/customer-centric/spending-trends-226861>

<sup>69</sup> "Why #TikTokMadeThemBuyIt," *TikTok for Business*, Archived 13 July 2023:

[https://web.archive.org/web/20230713164705/https://www.tiktok.com/business/library/TikTok\\_ebook\\_Why\\_TikTokMadeThemBuyIt.pdf](https://web.archive.org/web/20230713164705/https://www.tiktok.com/business/library/TikTok_ebook_Why_TikTokMadeThemBuyIt.pdf)

<sup>70</sup> See: Emily Glaser, "Many Americans struggle with debt. Social media doesn't help", *Vox*, 17 May 2021, available at: <https://www.vox.com/the-goods/22436051/social-media-credit-card-debt-instagram-tiktok>; Christopher Ingraham, "Your friends' social media posts are making you spend more money, researchers say", *Washington Post*, 19 February 2019, available at:

<https://www.washingtonpost.com/us-policy/2019/02/19/your-friends-social-media-posts-are-making-you-spend-more-money-researchers-say/>;

Joshua Bote, "'Buy now, pay later' is ascending the TikTok generation spiraling into debt, popularized by San Francisco tech firms", *SF Gate*, 4 May 2022. Available at: <https://www.sfgate.com/news/article/influencers-lead-Gen-Z-into-debt-17142294.php>

studies have shown that using social media can lower a person's self-control, and that higher social media use is associated with a lower credit score, higher levels of credit card debt<sup>71</sup> and increased compulsive buying.<sup>72</sup> This is of particular concern with platforms like TikTok that are geared towards younger users, as highlighted above.

Online companies are clearly interested in stoking impulse spending. As one report co-authored by the BNPL firm Klarna states: "often resulting from lapses of self-control, inner strength or resolve, unplanned purchases can be lucrative for retailers."<sup>73</sup> Importantly, advertising firms have written about how to target impulse buyers in order to boost sales.<sup>74</sup>

One lucrative audience found in many data broker and AdTech targeting offerings is "high spenders" - consumers identified as those who tend to shop often and spend a lot of money when they do.<sup>75</sup> These could be wealthy individuals with plenty of money to spare, or they could be those with particularly harmful spending habits - not unlike the high-spending "whales" that make up a large part of the gaming industries' income and who are more likely to be "problem gamblers" than they are rich individuals.<sup>76</sup> Targeting "high spenders" could even end up targeting at-risk individuals with mental health conditions.

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<sup>71</sup> "Social Networks May Inflate Self-Esteem, Reduce Self-Control" (*press release*), 14 January 2013. Available at:

<https://www8.gsb.columbia.edu/newsroom/newsn/2243/social-networks-may-inflate-selfesteem-reduce-selfcontrol>.

<sup>72</sup>Saeed Pahlevan Sharif and Ken Kyid Yeoh, "Excessive social networking sites use and online compulsive buying in young adults: the mediating role of money attitude", *Young Consumers*, 7 August 2018, available at: <https://www.emerald.com/insight/content/doi/10.1108/YC-10-2017-00743/full/html>.

<sup>73</sup> "Emotional eCommerce: Ups and downs in the online experience," *Karna*, July 2017, Available at: [https://www.klarna.com/assets/sites/3/2020/01/07094907/emotionalCommerce\\_Reading\\_Klarna.pdf](https://www.klarna.com/assets/sites/3/2020/01/07094907/emotionalCommerce_Reading_Klarna.pdf)

<sup>74</sup> See, e.g., Chris Thomas, "How to Increase Sales by Targeting Impulse Buyers" (*blog*), Cake Marketing Agency, archived on 21 November 2022 at

<https://web.archive.org/web/20221121181414/https://www.cake.agency/blog/impulse-buyers>; "How to Increase Revenue by Targeting Impulse Buyers" (*blog*), Quick Sprout, 22 January 2018, available at: <https://www.quicksprout.com/impulse-buyers/>; and "How To Target Facebook Ads To "Impulse purchase" Audience", AdTargeting, available at: <https://adtargeting.io/facebook-ad-targeting/impulse-purchase>.

<sup>75</sup> For example: Google's clean room offers the chance "to build an audience of high-value users", as covered in the data clean rooms section of this comment. Oracle provides an additional example: "Retail: Oracle purchase-based retail audiences are built from multiple data sources. These include SKU-level offline and ecommerce transaction data from more than 500 retailers and trip-level spend data from more than 50,000 merchants. Target frequent shoppers or high spenders by category or onboard your first-party data to reach existing customers and build spend-a-like models to acquire new customers. Additional audiences frequently used by retailers include lifestyle, life stage, proximity, and seasonal audiences." On: "Oracle Audiences" (webpage), Oracle, Archived on 19 October 2022. Archived on 19 October 2022 at:

<https://web.archive.org/web/20221019160357/https://www.oracle.com/cx/advertising/audiences/#rc30p2>

<sup>76</sup> Norwegian Consumer Council, *Insert Coin: How the gaming industry exploits consumers using loot boxes*, 31 May 2022. Available at:

<https://storage.forbrukerradet.no/media/wp-content/uploads/2022/05/2022-05-31-insert-coin-publish.pdf>

The use of mental health data in targeting could contribute to financial distress for some populations.

There are particular populations for whom such targeted appeals are particularly dangerous - stoking spending patterns that could be destabilizing.

People with compulsive buying behavior, for example, make up 6% of the U.S. population, making it a prevalent mental health disorder. Compulsive shopping is characterized by “persistent, excessive, impulsive and uncontrollable purchase of products” in spite of severe consequences.<sup>77</sup> Those with compulsive shopping disorder are a disadvantaged group.<sup>78</sup> A study found compulsive shoppers are more likely to be influenced by advertising, particularly those on the internet.<sup>79</sup>

Some neurological conditions have impulsive behavior as a symptom, making individuals with these diagnoses more predisposed to unplanned spending. These conditions include attention deficit disorder (ADD/ADHD)<sup>80</sup>, borderline personality disorder<sup>81</sup>, anxiety disorders<sup>82</sup>, and bipolar mood disorder.<sup>83</sup>

According to the American Psychiatric Association, spending sprees are a common form of risky behavior in those with bipolar disorder in particular.<sup>84</sup> A common tip for preventing impulsive spending during a manic episode in someone with bipolar mood disorder includes having another person password-protect or otherwise restrict internet access in an effort to cut off access to online shopping.<sup>85</sup>

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<sup>77</sup> Roser Granero et al, “Compulsive Buying Behavior: Clinical Comparison with Other Behavioral Addictions”, *Frontiers in Psychology*, vol 7, June 2016, doi: 10.3389/fpsyg.2016.00914. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4908125/>

<sup>78</sup> Kalina Mikołajczak-Degrauwe and Malaika Brengman, “The influence of advertising on compulsive buying – The role of persuasion knowledge”, *Journal of Behavioral Addictions*, vol. 3 issue 1, March 2014, doi: 10.1556/JBA.2.2013.018. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4117277/>

<sup>79</sup> Ibid.

<sup>80</sup> “Tips for Curbing the ADHD Spending Impulse”, *Edge Foundation*, available at: <https://edgefoundation.org/tips-for-curbing-the-adhd-spending-impulse/>

<sup>81</sup> Annegret Krause-Utz et al, “Self-reported impulsivity in women with borderline personality disorder: the role of childhood maltreatment severity and emotion regulation difficulties”, *Borderline Personality Disorder and Emotion Dysregulation*, March 2019, available at: <https://bpded.biomedcentral.com/articles/10.1186/s40479-019-0101-8>

<sup>82</sup> See, e.g., Lisheng Xia et al, “Anxious Individuals Are Impulsive Decision-Makers in the Delay Discounting Task: An ERP Study”, *Frontiers in Behavioral Neuroscience*, 24 January 2017, doi: 10.3389/fnbeh.2017.00005, available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5258725/>; Katarzyna Jakuszkowiak-Wojten et al, “Impulsivity in Anxiety Disorders: A critical review”, *Psychiatria Danubina*, vol. 27, 2015. Available at: [https://www.psychiatria-danubina.com/UserDocImages/pdf/dnb\\_vol27\\_sup1/dnb\\_vol27\\_sup1\\_452.pdf](https://www.psychiatria-danubina.com/UserDocImages/pdf/dnb_vol27_sup1/dnb_vol27_sup1_452.pdf)

<sup>83</sup> Emily Stewart, “Money problems are made worse if you live with bipolar disorder. Here’s how to get on top of things”, *ABC Australia*, 31 July 2020, available at: <https://www.abc.net.au/news/2020-08-01/money-budgeting-bipolar-disorder-mental-health/12495852>

<sup>84</sup> “What Are Bipolar Disorders?” *American Psychiatric Association*, Accessed 12 July 2023, Available at: <https://www.psychiatry.org/patients-families/bipolar-disorders/what-are-bipolar-disorders>

<sup>85</sup> See, for example: “Why Bipolar Disorder Mania Makes You Overspend (& How to Recover)”, *PsychCentral*, 22 April 2021. Available at: <https://psychcentral.com/bipolar/spending-sprees-in-bipolar-disorder>

The collection, sale and use of data allows for individuals with these conditions to be readily identified. The data brokerage NextMark advertises a mailing list entitled “AMERICANS ENDURING MENTAL HEALTH DISORDERS”. It advertises that companies can “[r]each more than 1 million people suffering from one or more mental disorders.” Amongst the segments of the list are ADD/ADHD and bipolar disorder.<sup>86</sup>

Even without these specialized lists, an analysis of someone’s online behavior can itself be enough to indicate a potential commercial opportunity. Data brokers and platforms are increasingly interested in understanding the psychological states of the consumers they wish to target with ads. Identifying a person’s emotions may be lucrative; for example, particular emotions can be triggers for compulsive shoppers,<sup>87</sup> and research has shown that for many people, negative emotions can lead to unplanned purchases as a way to boost one’s mood.<sup>88</sup> In the context of mental health, it’s possible just by analyzing someone’s social media posts to identify a manic state in someone with bipolar disorder, when impulsive spending is more likely to emerge.<sup>89</sup>

Another concern already mentioned is the ability of data brokers to identify those with cognitive disabilities. The NextMark list “SUFFERING SENIORS” for example, “contains individuals 55 years and older, who are selectable by their specific ailments.” This list includes Alzheimer’s as a segment.<sup>90</sup>

The collection and use of mental health-related data raises financial concerns, and should be looked at carefully by regulators. To date, regulation in this area has lagged.

## Many commercial entities have become data brokers and are using new technological tools to monetize consumer data.

*This section addresses questions 16, 20.*

The integration of commercial surveillance marketing applications into the daily business operations of consumer financial products has placed individuals in an unfair and especially vulnerable position. Today, consumers confront a powerful, largely invisible and unaccountable system which operates on a continuous and “omnichannel” basis. Nearly every major company

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<sup>86</sup> “Americans Enduring Mental Health Disorders Mailing List,” *NextMark*, Archived 12 July 2023: <https://web.archive.org/web/20230712195154/https://lists.nextmark.com/market.jsessionid=D5DE2FAAB582642FCAE291488290692F?page=order/online/datacard&id=243005>

<sup>87</sup> Donald Black, “A review of compulsive buying disorder”, *World Psychiatry*, vol. 6, issue 1, February 2017. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1805733/>

<sup>88</sup> A Selin Atalay and Margaret G. Meloy, “Retail therapy: A strategic effort to improve mood”, *Psychology & Marketing*, 2 May 2011, available at: <https://onlinelibrary.wiley.com/doi/abs/10.1002/mar.20404> .

<sup>89</sup> Roisin Kiberd, “How Facebook Can Be Used to Predict a Manic Episode”, *Motherboard*, 12 December 2014, available at: <https://www.vice.com/en/article/kbzv9/how-facebook-can-be-used-to-predict-a-manic-episode>

<sup>90</sup> See note 24.

engaged in some form of financial applications has either acquired sophisticated data harvesting<sup>91</sup> technologies and/or has partnered<sup>92</sup> with others<sup>93</sup> to have such robust cutting-edge power.

Today, many firms are engaged in data collection and monetization. Firms across virtually all industries and of all sizes collect, sell, use or otherwise share data about consumers.<sup>94</sup> A major focus for all the collection and use of the unlimited amounts of data gathered is for financial related services - from the marketing of credit and banking products, to the various methods used to promote and process the sale of consumer-facing products and services. Nearly all of these practices have implications for consumers' financial health.

There is a shift now to what is called "first party data" in response to growing privacy regulations and changes in the web tech that enables the historical methods of data collection and ad delivery.<sup>95</sup> Instead of relying on third party data, more companies are seeking to monetize their "first party data" sets - data that's collected by a company that a consumer has a direct relationship with. The shift to first party data expands the number of companies harvesting and using consumers' financial data and monetizing financial health signals.

These "first party data strategies"<sup>96</sup> are in no small part a strategy to avoid privacy law regulation and the securing of consent. With the move towards further collection of "first party" data, where a consumer has supposedly given permission to use their information to a concern, there will be even more invasive and manipulative personalization. This current move to increase personalized data collection and use through first party data should be examined by the Bureau.

### **Seller Defined Audiences**

One particularly relevant example of new avenues for categorizing consumers into financial-related buckets is the Internet Advertising Bureau's new first party solution, Seller Defined Audiences (SDAs).

SDAs are a system that allows a publisher (a company with a website) or its partner data brokers to monetize its traffic and allow its site visitors to be targeted with ads across other platforms based on the data the publisher and its partner brokers have and collect over time.

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<sup>91</sup> For example, see:

<https://web.archive.org/web/20230713183858/https://www.oracle.com/cx/marketing/data-management-platform/what-is-dmp/>

<sup>92</sup> For example, see: <https://www.treasuredata.com/>

<sup>93</sup> For example, see:

<https://web.archive.org/web/20230713184119/https://aws.amazon.com/solutions/financial-services/>

<sup>94</sup> This includes many consumer-facing entities that are establishing "retail media networks" - see Appendix B for more on this particular trend.

<sup>95</sup> Ed Mierzwinski & R.J. Cross, "Advanced Notice of Proposed Rulemaking on commercial surveillance and data security 16 CFR chapter undefined, 87 FR 51273," *U.S. PIRG*, 21 November 2022, <https://publicinterestnetwork.org/wp-content/uploads/2022/11/PIRG-FTC-data-comment-no-petitions-Nov-2022.pdf>

<sup>96</sup> "First Party Data Report Study Deloitte-Google 2022," *Deloitte*, Archived 13 July 2023: [https://web.archive.org/web/20230713170101/https://www.thinkwithgoogle.com/\\_gs/documents/17442/first\\_party\\_data\\_report\\_2022.pdf](https://web.archive.org/web/20230713170101/https://www.thinkwithgoogle.com/_gs/documents/17442/first_party_data_report_2022.pdf)

According to various industry trade press, SDAs “help publishers work together to monetize their first-party data on the open web.”<sup>97</sup>

The way SDAs work is by applying tags to consumers. These tags include both direct and inferred information about people’s finances. There are 1,600 attributes publishers can assign that cover three main categories: demographics, purchase intent, and interest.<sup>98</sup> These categories include: an individual’s level of education; their employment status and job (“unemployed”; “skilled/manual work”; “homemaker”); household income; median home value; the size of monthly home payments; personal income, “personal level affluence” assigning both a dollar sign to an individual’s affluence, as well as a “band” assignment, classifying an individual as having negative net worth, very low net worth, low net work, mid net worth, high net worth, or super high net worth. SDAs also includes tags on “purchase intent”, highlighting if someone is in the market for particular financial products such as payday or emergency loans or bail bonds. It also signals how much disposable income a consumer has, and how likely they are to spend it on certain products.

See Appendix - Figure 1 for a fuller list of SDA tags.

### **Identity resolution**

The U.S. databroker landscape evolution from the primary and discrete provision of information and datasets to one where there are far-reaching partnerships, affiliation and more critically-intensive tracking and ongoing surveillance of individuals can best be addressed by examining “identity resolution” tactics.

Identity resolution is, in the words of the identity solution company Viant, a way for companies to “identify your customers consistently from anonymous consumer touchpoints across devices and channels, then move seamlessly to activation.”<sup>99</sup>

Identity resolution relies on newer technological tools. Sometimes identity resolution firms use “deterministic” methods using inputs that companies know to be true, matching on data points like phone numbers, emails, device IDs, and user IDs. Others, however, are probabilistic, using predictive algorithms and statistical modeling to assign confidence intervals that a particular consumer’s actions online can be tied to a profile that the data broker or other company maintains.<sup>100</sup> One approach to probabilistic identity resolution is the process of “fingerprinting” -

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<sup>97</sup> Allison Schiff, “Meet Seller-Defined Audiences, The First Spec to Come Out Of Project Rearc,” *Ad Exchanger*, 25 February 2022, Available at: <https://www.adexchanger.com/publishers/meet-seller-defined-audiences-the-first-spec-to-come-out-of-project-rearc/>

<sup>98</sup> “Audience Taxonomy,” *IAB Tech Lab*, Archived 12 July 2023: <https://web.archive.org/web/20230712154202/https://iabtechlab.com/standards/audience-taxonomy/>

<sup>99</sup> “Identity Resolution Capability,” *Viant*, Archived 13 July 2023: <https://web.archive.org/web/20230713170408/https://www.viantinc.com/solutions/planning-and-buying/identity-resolution/>

<sup>100</sup> Josephine Liu, “Identity Resolution: The Definitive Guide,” *Twilio Segment*, 12 May 2020, Available at: <https://segment.com/blog/identity-resolution/>

assigning probabilities about someone's identity based on the triangulation of data points like time stamp, screen resolution or IP address.<sup>101</sup>

Identity resolution services, including via identity graphs, is now a core offering from many leading data companies. For example, TransUnion has significantly expanded its data gathering, analytic and target marketing operations across platforms, via a major acquisition strategy.<sup>102</sup> It explains its identity resolution process:

“Across a consumer's journey, one or many personal identifiers may be associated with an individual: email addresses, physical addresses, mobile phone numbers, device IDs, account usernames, customer IDs, loyalty numbers and more. An ID graph collects and connects these identifiers to a customer profile. But with fragmentation happening across devices and channels — connected TVs, social media, news publishers and more — most brands will need help to see:

- All the identifiers associated with a customer to market consistently across touchpoints — including channels or sites the brand doesn't own.
- A comprehensive view that includes attributes like browsing activity, purchase history and demographics — any datapoint that can help drive targeting decisions or more personalized campaigns.
- A picture of identity extending beyond an existing customer base — helping enable prospecting campaigns and marketing growth.”<sup>103</sup>

Experian's identity resolution offering enables clients to:

“Consolidate identifiers across available touchpoints and devices to build a comprehensive identity profile, gaining a connected view of consumer and business identities... collecting multiple identifiers from digital and offline sources, our own vast data sets, and first-party data sources — giving you access to high-definition views of the individuals you're trying to connect with, what works in the customer journey and how to increase accuracy, campaign reach, and engagement across devices... Our robust consumer data sets plus your first-party data, coupled with the most advanced matching algorithms, allow us to create and maintain a customer profile and persistent ID.”<sup>104</sup>

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<sup>101</sup> Kate Kaye, “As ad tech firms test ways to connect Google's' FLoC to other data, privacy advocates see fears coming true”, *Digiday*, 10 June 2021 available at: <https://digiday.com/marketing/as-ad-tech-firms-test-ways-to-connect-googles-floc-to-other-data-privacy-watchers-see-fears-coming-true/>

<sup>102</sup> Joe Mandese, “Credit Data Giant TransUnion Acquires Marketing Data Giant Neustar For \$3.1B, Will Accelerate Diversification,” *MediaPost*, 13 September 2021, Available at: <https://www.mediapost.com/publications/article/366841/credit-data-giant-transunion-acquires-marketing-da.html>

<sup>103</sup> “What is Identity Resolution?” *TransUnion*, 23 August 2021, Available at: <https://info.truadience.com/what-is-identity-resolution>

<sup>104</sup> “Identity graph and identity linking,” *Experian*, Archived 13 July 2023: <https://web.archive.org/web/20230713183217/https://www.experian.com/business/solutions/identity-solutions/identity-graph>

Another identity resolution tool offered by Equifax is Equifax’s “Marketing Identity Elements”. This product:

“offers the raw Personally Identifiable Information (PII) data needed to validate, enhance, verify, and link consumer records...leverage unique ID to link records across databases and create a single, actionable view of the customer... records can also be appended with financial capacity insights to differentiate consumers that are most likely to be able to purchase or invest in your products and services.”<sup>105</sup>

It’s critical for the Bureau to address contemporary data broker business models that are designed to integrate multiple data sources to “identify” and target an individual throughout their online and partially offline interactions.

### **Data clean rooms**

One piece of technology used to facilitate identity resolution is data clean rooms. These are cloud-based tools that allow companies to share their first party data sets with one another.<sup>106</sup> It’s particularly important to understand and monitor the development of clean rooms. For one, they advertise themselves as evading existing privacy regulations. They’re also growing in popularity.<sup>107</sup> And they can utilize machine learning (ML) techniques less familiar to many regulators; companies are continuously developing ML capabilities to increase the effectiveness of their operations in ways that may obviate traditional concepts of privacy, such as personally identifying information (PII). Clean rooms are a space where this development is happening now.

Indeed many of the marketing materials for clean rooms advertise that they are “privacy-conscious”<sup>108</sup> and enable companies to share data “without risking data privacy violations.”<sup>109</sup> As described by clean room company AppFlyer, “Data clean rooms allow marketers to harness the power of the combined data set while adhering to privacy regulations.”<sup>110</sup> In particular, clean rooms seem to have been able to subvert Europe’s GDPR to target consumers with ads for financial products.<sup>111</sup>

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<sup>105</sup> “Marketing Identity Elements,” *Equifax*, Archived 13 July 2023: <https://web.archive.org/web/20230713183510/https://assets.equifax.com/marketing/US/assets/marketing-identity-elements-product-sheet.pdf>

<sup>106</sup> John McDermott, “What the Tech are clean rooms?”, *The Current* by TradeDesk, 8 June 2022. Available at: <https://www.thetradedesk.com/us/news/what-the-tech-are-clean-rooms>

<sup>107</sup> A post on the industry blog AdExchanger calls clean rooms “one of the hottest technologies in marketing when it comes to secure, modern data collection.” Source: St. Clair McLean, “Third-Party, Direct Or In-House: Which Clean Room is Right For You?”, 28 June 2022. Available at: <https://www.adexchanger.com/data-driven-thinking/third-party-direct-or-in-house-which-clean-room-is-right-for-you/>

<sup>108</sup> See note 106.

<sup>109</sup> Gartner, *Brands Retreat Behind Walled Gardens as Data Privacy Efforts Take Root*, 2021. Available at: <https://emtemp.gcom.cloud/ngw/globalassets/en/marketing/documents/brands-retreat-behind-walled-gardens-as-data-privacy-efforts-take-root-research.pdf>

<sup>110</sup> AppFlyer, “It’s time to come clean - the complete data clean rooms guide”, available at: <https://www.appflyer.com/resources/guides/data-clean-rooms/>

<sup>111</sup> A customer testimonial found on clean room company InfoSum’s website states: “Post-GDPR it’s been difficult to find technology that enables you to collaborate with other parties to share data insights and

There are different kinds of clean rooms run by different kinds of companies. Some belong to industry giants, such as Google’s Ads Data Hub<sup>112</sup>, Amazon Marketing Cloud<sup>113</sup> and Facebook Advanced Analytics.<sup>114</sup> These platforms are sometimes called “walled gardens” as they provide data about users targeted inside each of the respective companies’ AdTech stack.<sup>115</sup>

Others are “third party clean rooms” run by companies like Snowflake, Karlsgate, LiveRamp<sup>116</sup>, InfoSum and AppFlyer that specialize in providing a clean room platform to companies wanting to share data with one another.

### *The technology of clean rooms*

Clean rooms are data platforms that allow companies to share first party data with one another without giving the other party full access to the underlying, user-level data. This ability to set controls on who has access to granular information about consumers is the primary reason that data clean rooms are able to subvert current privacy regulations.

The specific technology and processes of every clean room can vary. In general, many clean rooms are relational database management systems, providing cloud-based platforms where client companies can upload databases of their customers (using their first party data) or prospective customers (using third party data) to an independent server maintained by the clean room company. For example, let’s say two companies, Company A and Company B, want to use each other’s data. They contract with the clean room company InfoSum, which calls its technology a “decentralized multi-party” clean room. Company A and Company B connect their respective first party datasets to two of InfoSum’s “bunkers”, which, as the company explains, are “standalone, private cloud instances”. According to InfoSum, “[e]ach Bunker is unique to a single company, and only the data owner ever has access to the Bunker.”<sup>117</sup>

Once each client company’s data is uploaded, user permissions can be set for each of the databases to control who has access to view or modify the user-level data in a given database. This is what allows for clean rooms to be “privacy compliant”, as technically, Company A and

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intelligence, as well as to build out custom audiences. The InfoSum decentralised [clean room] infrastructure allows just that.” Source: InfoSum, *Breakdown service provider unlocks enhanced targeting with Regit*. Available at:

<https://hello.infosum.com/hubfs/resources/infosum-case-study-regit-breakdown-recovery.pdf>

<sup>112</sup> “Ads Data Hub” (*web page*), Google, accessed on 11 October 2022 at:

<https://developers.google.com/ads-data-hub>

<sup>113</sup> “What is Amazon Marketing Cloud” (*web page*), Amazon Ads, accessed on 11 October 2022 at:

<https://advertising.amazon.com/solutions/products/amazon-marketing-cloud>

<sup>114</sup> AppFlyer, “It’s time to come clean - the complete data clean rooms guide”, available at:

<https://www.appsflyer.com/resources/guides/data-clean-rooms/>

<sup>115</sup> “What are the different types of data clean rooms?”, Habu, accessed on 29 September 2022.

<https://habu.com/resources/common-questions/what-are-the-different-types-of-data-clean-rooms>

<sup>116</sup> The data broker LiveRamp runs a platform called Safe Haven that they refer to as a “data collaboration platform”, but carries out clean room capabilities. See: <https://liveramp.com/data-collaboration/>

<sup>117</sup> *The ultimate guide to Data Clean Rooms*, InfoSum, 2022, made accessible at:

<https://acrobat.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3A779609af-82af-3b07-93d9-8f979fad81c9&viewer%21megaVerb=group-discover>

Company B can set their permissions such that they can't see each other's underlying data. It is possible, however, for companies using a clean room to share the totality of their data with one another - using a clean room does not guarantee that sharing of PII or other sensitive data is not happening.

Once Company A and Company B's data is uploaded into their respective servers, the data sets are then joined together, usually by the clean room company or an automated process the company has designed. This step seeks to identify what customers the first party data sets have in common, and what the other company knows about these shared audiences, like demographic information or past purchasing behavior, that can be shared to augment the other company's data.<sup>118</sup>

This is the identity resolution step. This match can be done using a number of unique identifiers that may exist in both data sets, such as advertising IDs, IP addresses, hashed emails, or device IDs.<sup>119</sup> Clean room companies purport to enable this matching process without exposing the underlying data to any company involved in the process, including the clean room company itself, though it's likely not all clean rooms actually maintain this capability.<sup>120</sup> (This identity resolution step is a particular sticking point for "privacy compliant" clean rooms. As the clean room company InfoSum writes on its blog: "The 'dirty' element of these solutions is that they often still require data to be moved and matched against a centralized identity spine."<sup>121</sup> InfoSum, for its part, claims to get around this problem by having even its data matching capabilities occur in "decentralized infrastructure", allowing for the "non-movement" of data.)

If there is not a shared attribute that data sets can be matched on, clean room companies offer other identity resolution solutions. Sometimes clean rooms include third party integrations - allowing third party, purchased data to be combined with a company's first party data. This third party data - often supplied by data brokers - can help with the matching process. As the data clean room platform Snowflake explains in some of its marketing materials:

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<sup>118</sup> AppFlyer, "It's time to come clean - the complete data clean rooms guide", available at:

<https://www.appsflyer.com/resources/guides/data-clean-rooms/>

<sup>119</sup> "Snowflake data clean rooms allow for sensitive data derived from unique identifiers, such as emails, hashed emails, names, device IDs, and IP addresses, to be leveraged while preserving privacy. From there, marketers can segment and target existing customers by finding overlaps with a publisher's audience without ETL (that is, without having to move or copy the data)." From: *How Snowflake's Data Clean Rooms Help Publishers and Marketers Improve Ad Effectiveness*, Snowflake, 2021, accessible at: [https://landing.martechtracker.com/Whitepaper-Attachments---MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20\(1\).pdf](https://landing.martechtracker.com/Whitepaper-Attachments---MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20(1).pdf). (If at any point this report is taken offline, a PDF is available from this comment's authors by request).

<sup>120</sup> See: *How Snowflake's Data Clean Rooms Help Publishers and Marketers Improve Ad Effectiveness*, Snowflake, 2021, accessible at:

[https://landing.martechtracker.com/Whitepaper-Attachments---MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20\(1\).pdf](https://landing.martechtracker.com/Whitepaper-Attachments---MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20(1).pdf). Or, see: "Build your own Data Clean Room" (web page), InfoSum, accessed on 13 October 2022 at:

<https://www.infosum.com/platform/secure-data-clean-room>

<sup>121</sup> Devon DeBlasio, "The Secure Data Clean Room: Unfettered Match Rates" (blog), InfoSum, 16 February 2022. Available at:

<https://www.infosum.com/blog/the-secure-data-clean-room-unfettered-match-rates>

“There will invariably be cases where two parties lack a common identifier, which can make joining the data and finding overlaps on a single key such as email address less able to match all the possible data between the parties. In extreme cases, the marketer might have only email addresses, while the publisher has only IP addresses, but they still want to join their data together for allowed analyses. When Snowflake customers find themselves in this position, they can leverage identity enrichment providers on Snowflake Data Marketplace such as Acxiom, Epsilon, and Neustar for data enrichment and identity joining. These providers have vast troves of third party customer data that marketers and publishers can use to refine and activate their audiences and boost their join and match rates. The data enrichment step occurs only in the data clean room and third party data does not get populated into either party’s Snowflake account.”<sup>122</sup>

(The use of supplementary third party data is, of course, not limited to identity resolution in some clean room platforms. Some offer third party integrations primarily for the purpose of augmenting a company’s data about its customers, like demographics, preferences and past behavior.)

There are additional identity resolution tools clean room companies use to match data sets that are missing a shared identifier. As clean room company AppFlyer explains of its offerings: “If such identifiers do not exist, advanced tools such as machine learning and probabilistic modeling could be applied to enhance matching capabilities”.<sup>123</sup>

Sometimes clean room companies have extensive identity resolution solutions themselves - such as LiveRamp’s Safe Haven that includes the “RampID”. Some clean room companies will partner with outside firms that specialize in identity resolution. The Trade Desk Unified ID 2.0 is one option that’s been gaining traction in AdTech networks.<sup>124</sup>

Once Company A and Company B have joined their data, they begin using what they learn. Their disparate databases can be connected or used in tandem to conduct various analyses, often using SQL queries to do so.<sup>125</sup> Examples of analyses may include building a “360 view” of customers made possible by comparing the two companies’ first party data. For example, a bank partnering with an online radio platform may gain intel about what kinds of radio stations

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<sup>122</sup> *How Snowflake’s Data Clean Rooms Help Publishers and Marketers Improve Ad Effectiveness*, Snowflake, 2021, accessible at: [https://landing.martechtracker.com/Whitepaper-Attachments--MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20\(1\).pdf](https://landing.martechtracker.com/Whitepaper-Attachments--MTT-V4/how-snowflake-s-data-clean-room-s-help-publishers-and-marketers-improve-ad-effectiveness%20(1).pdf).

<sup>123</sup> AppFlyer, “It’s time to come clean - the complete data clean rooms guide”, available at: <https://www.appsflyer.com/resources/guides/data-clean-rooms/>

<sup>124</sup> For more on identity resolution, see: Ido Sivan-Sevilla and Patrick T. Parham, *Toward (Greater) Consumer Surveillance in a “Cookie-less” World: A Comparative Analysis of Current and Future Web Tracking Mechanisms*, UMD, available at: [https://www.ftc.gov/system/files/ftc\\_gov/pdf/PrivacyCon-2022-Parham-Toward-Greater-Consumer-Surveillance-in-a-Cookie-less-World.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/PrivacyCon-2022-Parham-Toward-Greater-Consumer-Surveillance-in-a-Cookie-less-World.pdf)

<sup>125</sup> See for example: “What is Amazon Marketing Cloud” (*web page*), Amazon Ads, accessed on 11 October 2022 at: <https://advertising.amazon.com/solutions/products/amazon-marketing-cloud>

its customers listen to and what ads they've responded to in the past, while the radio platform learns about the financial demographics of its listeners.<sup>126</sup> Depending on how much data each company has harvested on its customers, the shared insights can be expansive and fall far outside the bounds of what's most useful for their immediate goals.

The joined data can then also be activated to place targeted ads. Use cases of clean rooms can include a company that is a publisher (Company A) airing targeted ads on behalf of a retailer (Company B).

In some cases, clean room companies are integrated with ad delivery networks, as is the case with LiveRamp<sup>127</sup>, allowing combined datasets to be used in real-time bidding networks or sell side platforms to achieve the same ends of broader targeted advertising happening all over the web. This version, in particular, is indistinguishable from third party AdTech systems.

Another common clean room use case is the construction of lookalike audiences - often called "cohorts" or just "audiences". Using the demographic and behavioral profiles of Company B's current clientele, Company A - a publisher - can locate amongst its users those with a similar profile, allowing for the targeting of ads based on shared characteristics.<sup>128</sup> A use case Google provides is using its clean room "to build an audience of high-value users" for targeted advertising based on its data.<sup>129</sup> The concept of "high-value users" may expose vulnerable people to increased risk of harm (as previously discussed in the section of this comment "The use of mental health data in targeting could contribute to financial distress for some populations"). Google also advertises the ability to "enrich audiences and gather insights".<sup>130</sup>

Clean rooms are also used to measure the effectiveness of ads. Using Google Ads Data Hub, companies can upload first party data sets and cross reference with Google data, allowing marketing departments to measure impressions and conversions happening on ads delivered inside Google's platforms, like YouTube.<sup>131</sup>

Larger clean rooms can also provide more sophisticated levers. For example, companies can use Google's clean room to conduct A/B testing on customers.<sup>132</sup>

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<sup>126</sup> *Case Study: TSB increase account applications by 31% using InfoSum*, InfoSum, accessed on 18 September 2022 at: <https://hello.infosum.com/hubfs/resources/infosum-case-study-global-tsb.pdf>

<sup>127</sup> "Data Activation" (*web page*), LiveRamp, archived on 21 November 2022 at: <https://web.archive.org/web/20221121163547/https://liveramp.com/data-activation/>

<sup>128</sup> For a helpful use case, see this InfoSum case study report: *Case Study: TSB increase account applications by 31% using InfoSum*, InfoSum, accessed on 18 September 2022 at: <https://hello.infosum.com/hubfs/resources/infosum-case-study-global-tsb.pdf>

<sup>129</sup> "Custom Floodlight variable matching - Long-haul elite-status fliers" (*web page*), Google Ads Data Hub, accessed on 18 October 2022 at: [https://developers.google.com/ads-data-hub/guides/cfv-matching#long-haul\\_elite-status\\_fliers](https://developers.google.com/ads-data-hub/guides/cfv-matching#long-haul_elite-status_fliers)

<sup>130</sup> "Join first-party data" (*web page*), Google Ads Data Hub, accessed on 18 October 2022 at: <https://developers.google.com/ads-data-hub/guides/join-your-data>

<sup>131</sup> Ibid.

<sup>132</sup> Ibid.

### *Regulating clean rooms*

Clean rooms are troubling. These companies purport to have privacy-centric solutions that enable much of the extensive tracking of consumers and the same targeted advertising outcomes as today's system - if not worse.<sup>133</sup> They are structured to get around some of the more obvious routes for privacy regulation.

One of the primary arguments clean rooms make about their legality is that PII doesn't necessarily exchange hands.<sup>134</sup> Other clean rooms emphasize that the data is, in effect, anonymous, as Company A and Company B don't necessarily get raw, individual-level data from one another.<sup>135</sup> Others emphasize the non-movement of data.

For example, the clean room company InfoSum relies on the creation of mathematical models of individuals to match and activate data across clients. As it writes: "Within a decentralized multi-party clean room the data processing takes place where the data itself is located, eliminating the need for the data itself to move. Instead, *a mathematical model of the individuals in each dataset is generated which is anonymous and contains no personal data (PII)*. It is the mathematical model that moves not the underlying protected data during computation resulting in faster results with greater privacy protection" (emphasis added).<sup>136</sup>

The results of these technologies - as privacy preserving as they may be - are largely the same, if not worse. For example, clean room companies, touting their privacy credentials, are equally touting their ability to use sensitive data in the course of their business. InfoSum states that its "patented decentralization and non-movement of data technology" enables companies to "*analyze, enrich, and activate sensitive data*" (emphasis added).<sup>137</sup> Snowflake says its "data clean rooms allow for *sensitive data derived from unique identifiers*, such as emails, hashed emails, names, device IDs, and IP addresses, *to be leveraged while preserving privacy*" (emphasis added).<sup>138</sup>

For this reason, regulations of the data sharing economy should not focus on particular technologies - regulations should focus primarily on the outcomes. There should be no ads for financial products or for other commercial products paired with BNPL or other easy loans targeted to individuals on a one-to-one basis, period.

## Next steps for the CFPB

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<sup>133</sup> See, for example, the source in note 124.

<sup>134</sup> Again, it's worth noting that the individual-level data may not be exchanged between Company A and Company B, but may in fact be revealed to the clean room company itself.

<sup>135</sup> It's also worth reemphasizing that companies using a clean room service may still elect to share their entire datasets with one another, and just use a clean room's platform as the mechanism for doing so.

<sup>136</sup> See note 117.

<sup>137</sup> Ibid.

<sup>138</sup> See note 122.

U.S. PIRG and CDD wish to reinforce the request made in the coalition letter addressed to the Honorable Rohit Chopra on February 8, 2023, [Re: Request for broad consumer financial market correction, beginning with an advisory opinion regarding credit header data](#). The CFPB should issue an Advisory Opinion (AO) clarifying that “credit header” data is not exempt from regulations promulgated under the Fair Credit Reporting Act (FCRA).

Additionally, the Bureau should adopt rules that make accountable all companies collecting, sharing, selling and providing access to consumer data. Because it’s nearly impossible to tease out what data is used to make decisions about consumers - like what financial products they will be shown ads for - broad prohibitions on the collection and sale of consumer data must be considered. Consumers need to know whether and how they have been scored; in the current marketplace that has been unregulated since its inception about 20 years ago, tracking what data has flowed into such decisioning systems is practically impossible.<sup>139</sup>

Additionally, it’s critical for the Bureau to address contemporary data broker business models and the new technologies that enable them. This includes firms that focus on the integration of multiple data sources to “identify” and target an individual throughout their online and partially offline interactions. The Bureau must also examine the moves to first party data collection and implementation strategies, as well as data clean rooms, and the further development of machine learning tools.

The CFPB should additionally consider ways to ensure that sensitive data, like spending and purchase history or mental health information, is not used to shape how consumers make financial and spending decisions online.

Given the proliferation of easy-to-access instant loans online - the BNPL industry - targeted ads have become more financially dangerous for consumers, particularly those with mental health concerns that make them particularly vulnerable to targeted appeals.

## The consumer perspective: submitting access, correction and deletion requests to major data brokers

*This section addresses questions 11 and 15 in Market-level inquiry, and question 4 in the individual inquiry.*

In order to understand the consumer experience of interacting with data brokers, 3 PIRG researchers conducted an investigation attempting to access, correct or delete our personal data from 32 different data brokers, including four data brokers focused on the financial sector.

The investigation showed that for the researchers - let alone the average consumer - submitting these requests is a nearly impossible process. Identifying which data brokers may have your information is impossible given the number and relative secrecy of data broker operations.

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<sup>139</sup> See note 43.

Other barriers we identified include:

- Access, deletion, or opt-out requests are reserved for residents of specific states.
- Requests to selected financial data brokers were difficult to complete
- Privacy settings links are mislabeled or non-existent.
- Sites for data deletion, access, or opt-out are often unavailable or difficult to locate.
- Petitions to opt-out of cookies are outsourced to sites that handle bulk requests.

Since data brokers collect and sell incredible amounts of consumer data, it is both concerning and frustrating that such requests are difficult to access, denied, or reserved for only a sector of the population. In the rare event that researchers were able to submit data requests, it was not always clear that data brokers honored or fulfilled such requests. Researchers received emails that brokers had received a data request without confirmation it was being acted upon. Even for requests submitted 28 days ago, researchers have as of the submission of this comment, received neither access to data nor confirmation of successful deletion requests.

To make this system work better for consumers, it is essential that the Consumer Financial Protection Bureau consider how data brokers and their convoluted request processes may affect consumers.

#### *Description of research method*

Researchers the [Don't Sell My Data campaign with U.S. PIRG](#) submitted data-related requests to 32 major data brokers.

The first step was to identify data brokers likely to possess our information. This proved impossible to do. The currently available state-level data broker registries in California and Vermont only contain the information for a fraction of active data brokers, and there's no indication available to consumers which are likely to hold their data, or what types of data these entities may hold. Thus, data brokers were identified through a market analysis to identify major players in the industry that were not in the credit bureau sector and are based in the United States. In order to increase the odds of one of the researchers having data held by data brokers, researchers sought to select the largest players. Researchers conducted an assessment of each company's market share and overall prominence by identifying how much data the firms possessed, indicated through the number of consumer profiles each reported having on their sites. Further, company websites were searched for any further information related to the number of data providers, partners, or suppliers. Both of these measures - number of consumer profiles and data partners - were used to better understand the size and scope of each data broker. Some of the most significant companies included Pulse Point, Oracle BlueKai, and Data Axle. A full list of data brokers included in this analysis is available in the Appendix, Table 2.

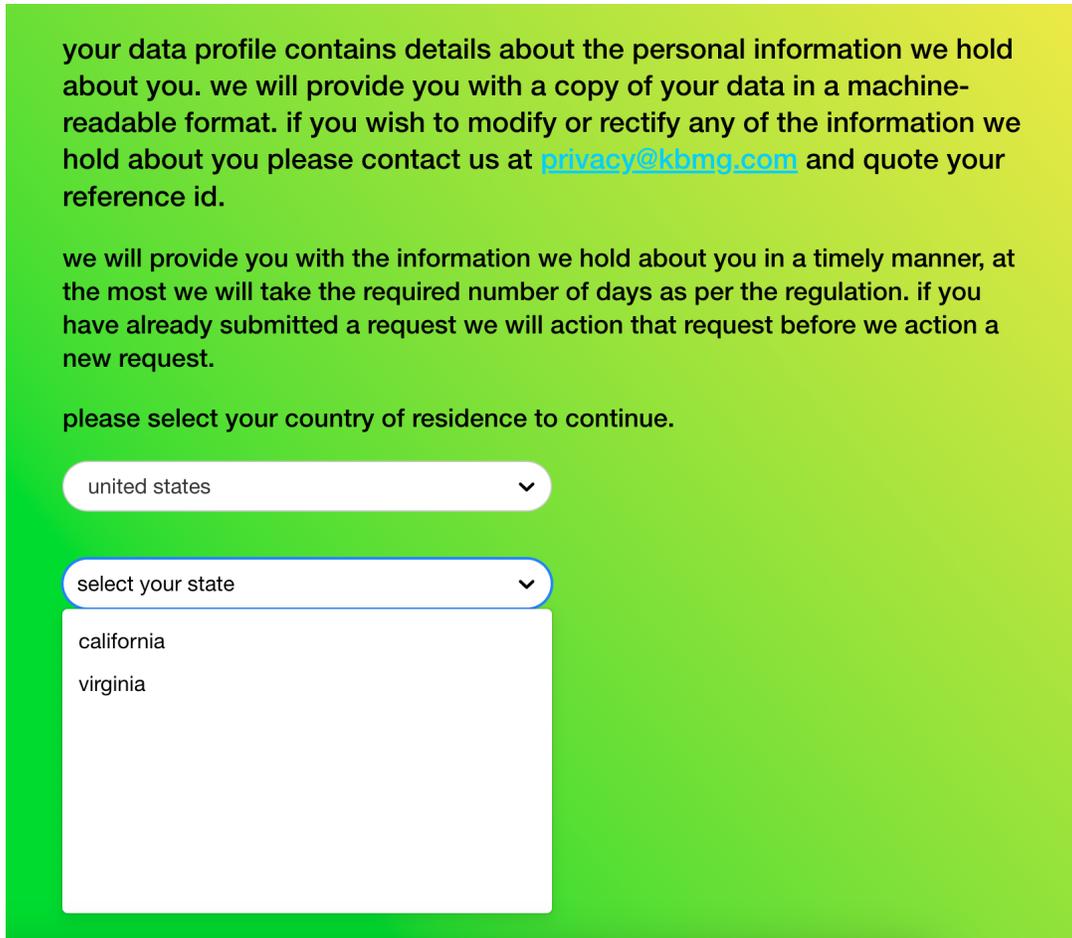
#### **Key Themes**

***Access, deletion, or opt-out requests reserved for residents of specific states***

A review of the privacy policies of over 30 data brokers revealed there is no industry-wide standard when it comes to whether consumers are given the option to access or remove their data. Every data broker has a slightly different method for locating their privacy policies and data management options. Some data brokers provide links at the bottom of their site labeled “Your Privacy Choices,” “Do Not Sell My Personal Information,” or “Control My Personal Data.” Depending on the data broker, clicking on those links may direct you to a web form where you can submit privacy requests. Other data brokers only provide a link to their privacy policy, which means that consumers have to search through the entire policy to try and find what their rights are and how they can exercise them.

One noticeable trend among the data brokers was that the right to access, correct, or delete personal data was often reserved for residents of states where a consumer data privacy law requiring those rights has been enacted.

For instance, Criteo, ID5, and Magnite provided only California consumers the option to exercise their privacy rights. Other companies, such as Oracle, LiveRamp, KBM Group and Data Axle allowed California and Virginia residents to submit an access, correction, or deletion request. In total, 12 of the 32 data brokers limited the ability to access or delete data to residents of specific states.



*Photo: KBM Group web form for submitting access and/or deletion requests.*

Because none of the researchers involved in this project are a resident of a state with a consumer data privacy law, we were unable to submit requests to access our data from any of the companies mentioned above. It is unclear how long it would take for those companies to respond to a successful access, correction, or deletion request.

Overall, the experience of attempting to access, correct, or delete personal data held by data brokers is heavily dependent on a consumer’s state of residence and the policies of the individual data broker.

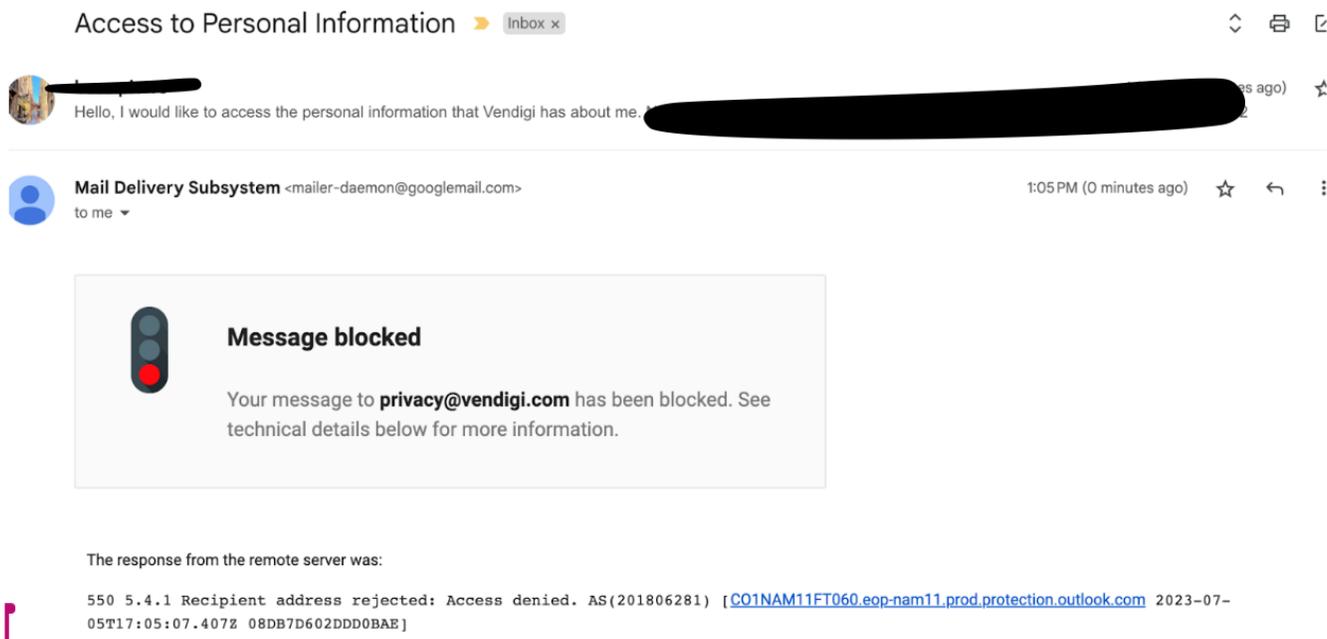
***Financial data broker requests difficult or impossible to complete***

Across financial data broker platforms, requests to access, correct, and delete data were either difficult to fulfill. PIRG researchers attempted to submit such requests across four data broker platforms: Cardlytics, DataLab, Sensibill (Q2), and Vendigi.

Locating information for Cardlytics, DataLab, Sensibill (Q2), and Vendigi required reading the privacy policy. In the policies of DataLab, Sensibill (Q2) and Vendigi, researchers identified that

people seeking to access or delete their data must send the company an email. Composing an email and knowing what information to include in such a request can pose a barrier to submitting privacy requests.

In the case of submitting a request to Vendigi, the email address provided in the privacy policy was invalid or inaccurate, causing an error message and the inability to submit a request.



*Photo: Failed email exchange with Vendigi as part of a request for access to personal information.*

Researchers also experienced confusion attempting to submit a request for accessing data maintained by Sensibill (Q2). The access request was denied for not having used a business email in the submission process. At the very least, the firm's website appears to collect data on every visitor - not just those accessing the site for business purposes.

## Q2 is committed to your privacy.

Please complete the form so we can fulfill your request. We may follow up to ask you for additional information necessary to confirm your identity before responding to your request. Fields with a (\*) are mandatory.

For other privacy or data security inquiries, please email us at [privacy@q2.com](mailto:privacy@q2.com)

Please complete the form below so we can fulfill your request:

Request \*  
Type: Access my personal information

First Name: \*  
RJ

Last Name: \*  
Cross

Email Address: \*  
[Redacted]

Country \*  
[Redacted]

Must be Business email.

*Photo: Sensibill (Q2) access request denied for not supplying a business email.*

To opt-out of the use of your data for bank-partnered marketing program, consumers must submit the request through their financial institution.<sup>140</sup>

### **Privacy settings link mislabeled or non-existent**

Our review revealed there is no industry-wide standard when it comes to whether consumers are given the option to access or remove their data. Every data broker has a slightly different method for locating their privacy policies and data management options. Some data brokers provide links at the bottom of their site labeled “Your Privacy Choices,” “Do Not Sell My Personal Information,” or “Control My Personal Data.” Depending on the data broker, clicking on those links may direct you to a web form where you can submit privacy requests. Other data brokers only provide a link to their privacy policy, which means that consumers have to search through the entire policy to try and find what their rights are and how they can exercise them.

Some data brokers provided links that were misleading to the consumer. For instance, Cloudera has an option to select “Unsubscribe / Do Not Sell My Personal Information” at the bottom of their webpage. However, this link directs you to a webpage that only allows the consumer to unsubscribe from Cloudera updates and communications - not submit a request to access data or opt out of data collection.

<sup>140</sup> Cardlytics claims that “Through our partnerships with banks, we have insight into actual bank transaction data for over 186M consumers”

# Unsubscribe to Cloudera Updates and Communications

Cloudera respects your privacy and takes your communications preferences seriously.

Please enter and submit your email in the space below to unsubscribe from Cloudera updates and marketing and promotional communications.

To learn about Cloudera's personal data handling and privacy practices, visit the Cloudera [Privacy Statement and Data Policy](#) page. You may also contact us at [privacy@cloudera.com](mailto:privacy@cloudera.com) or 1-888-789-1488.

Submit

Reset

Contact Us

Call a Sales Representative

From the US: [\(888\) 789-1488](tel:8887891488)

International: [+1 \(650\) 362-0488](tel:+16503620488)

Subscribe to Cloudera Updates

[Subscribe](#)

*Photo: Cloudera web form for unsubscribing to Cloudera updates and communications.*

To learn about your rights regarding personal data, consumers must click again, and read Cloudera's "Privacy Statement and Data Policy." Within that policy, the company outlines that consumers may be entitled to exercise certain privacy rights by submitting a request via email, depending on if a data privacy law applies to them. This is an unnecessarily complicated and fundamentally not consumer-friendly process.

***Companies may not be able to identify consumers using information consumers have ready access to.***

A complicating factor researchers encountered was difficulty providing enough information for data brokers to affirmatively locate users' data.

For example, researchers encountered a place where the limitation appeared to be the involvement of a third party. Our data access request to the broker Epsilon came back with the message that the third party firm that Epsilon uses for identity verification could not verify the identity of our researcher based on her name, address and date of birth. We were ultimately unable to complete this request.

## Identity Verification Required

Correction, deletion and access report requests require verifying your identity. Epsilon will provide the personal information you submit below to a service provider who supplies identity verification services to Epsilon. The service provider will ask a series of questions to confirm your identity. Those questions are based on information the service provider has collected from public records and are not based on information collected by Epsilon. Once your identity is verified, Epsilon will process your request, by deleting your personal information.

CONSUMER IDENTITY CANNOT BE VERIFIED: Consumer Access Report requests require verifying the identity of the consumer whose personal information was submitted. Epsilon provides the information submitted to a service provider that supplies identity verification services. The service provider could not verify the identity for the name, address, and date of birth submitted. Modify and re-submit this request or call Epsilon at (866) 267-3861.



*Photo: Epsilon webpage after an access request was denied. It's also worth noting that despite the fact researchers submitted a request to simply access their data, this screen in the data request process reads: "Once your identity is verified, Epsilon will process your request, by deleting your information." It's an open question whether a consumer would be able to access the data held on them, or if the act of requesting access automatically triggers the deletion of data, as this notice from Epsilon seems to indicate.*

This points to an additional problem. Data collection and targeting increasingly dances around the concept of personally identifiable information (PII) by using "anonymized" data like special user IDs or lookalike audiences to profile and target consumers. Just because a company does not rely on a consumer's name to identify them does **not** mean the company doesn't have a profile of information about the consumer it maintains and uses. Instead, companies may use special IDs to identify the consumer that the consumer does not have access to. This could even be as simple as a hashed email, which would not resemble the version of an email address a consumer would submit. This is one way companies may be able to avoid having to give consumers access to their information.

### **Outsourcing cookies opt-out requests**

Though opting out is not traditionally a component of FCRA, it's important for the consumer experience to examine what opt out requests look like. Opting out is one of the few tools

consumers possess to take control of their data, including that used for constructing profiles of their financial health.

Several data brokers provide links to third-party platforms where consumers can place cookie opt-out requests for a large number of companies at one time. These opt-out platforms provide a long list of advertising companies that deploy user data to produce targeted advertisements, primarily through cookies. These bulk opt-out mechanisms were relied on by two different data brokers included in our study - theTradeDesk and Quantcast.

Both theTradeDesk and Quantcast outsourced these opt-out mechanisms to two main webpages, [TrustArc](#) and [YourAdChoices](#). It is important to note that while these platforms list a large number of different companies, advertisers, and data brokers, not all organizations displayed actually offer opt-out opportunities through the site.

In the case of TrustArc, there are a number of companies listed that do not have an opt-out box available. Instead, there is a “Learn More” button that leads to a pop-up saying, “This company has either not yet integrated with TrustArc’s Preference Manager or does not have an opt-out mechanism available.” It’s unclear what the point of including such firms is.

## Your Advertising Choices

### How does it work?

Advertisers may collect data about your online browsing activity and use it to show you targeted ads (a process known as “behavioral advertising”).

You can prevent the companies listed below from showing you targeted ads by submitting opt-outs. Opting-out will only prevent targeted ads so you may continue to see generic (non-targeted ads) from these companies after you opt-out.

You may opt in to behaviorally targeted ads anytime by deleting your browser’s cookies.

Select All

	Company ▲	Company Type ▼	Opt-out
+	<b>33Across</b>	Ad Platform	<input type="checkbox"/>
+	<b>Acxiom</b>	Data Management Platform (DMP)	<a href="#">Learn More</a>
+	<b>Adslot</b>	Ad Network	<a href="#">Learn More</a>
+	<b>Amobee Inc.</b>	Ad Server	<input type="checkbox"/>
+	<b>Basis Global Technologies, Inc.</b>	Demand Side Platform (DSP)	<a href="#">Learn More</a>
+	<b>ChoiceStream, Inc.</b>	Ad Network	<a href="#">Learn More</a>
+	<b>Collective, Inc. dba Visto</b>	Ad Network	<a href="#">Learn More</a>
+	<b>Datonic (formerly AlmondNet Data Division)</b>	Data Provider / Aggregator	<a href="#">Learn More</a>
+	<b>Epsilon</b>	Ad Network	<input type="checkbox"/>
+	<b>Fox Broadcasting Company</b>	Publisher Related	<a href="#">Learn More</a>

### Educate Yourself

Learn more about behavioral advertising and your choices.

- [▶ Industry Resources - US Visitors »](#)
- [▶ Industry Resources - EU Visitors »](#)
- [▶ TrustArc Resources »](#)

Photo: TrustArc list of companies and their options for opting-out of targeted advertising.

**TrustArc Preference Manager**

This company has either not yet integrated with TrustArc's Preference Manager or does not have an opt-out mechanism available.

**Not yet integrated:** These companies have an opt-out mechanism but have not yet integrated with TrustArc's Preference Manager. [Click here to go to site.](#)

**Not available:** This company does not have an opt-out mechanism available. Click below for:

- [DAA Consumer Choice Page](#)
- [EDAA Your Online Choices](#)
- [DAAC Your Ad Choices](#)

[Close](#)

	Company		
+	<a href="#">33Across</a>	Ad Platform	<input type="checkbox"/>
+	<a href="#">Acxiom</a>	Data Management Platform (DMP)	<a href="#">Learn More</a>
+	<a href="#">Adslot</a>	Ad Network	<a href="#">Learn More</a>
+	<a href="#">Amobee Inc.</a>	Ad Server	<input type="checkbox"/>
+	<a href="#">Basis Global Technologies, Inc.</a>	Demand Side Platform (DSP)	<a href="#">Learn More</a>

Photo: The TrustArc webpage when you select “Learn More” about a company’s opt-out policy.

The [Network Advertising Initiative](#) is another example of a bulk opt-out mechanism used by some companies, such as [TrueData](#). This webpage also enables consumers to withdraw from specialized advertising across the industry, while also providing information for consumers looking to adjust privacy settings on their mobile device or browser.

The NAI reminds consumers that their page is merely a convenience offered to the public and it is ultimately the individual data brokers’ responsibility to fulfill the request. The language of that stipulation is included in the image below.

## OPT OUT OF INTEREST-BASED ADVERTISING

Welcome to the NAI's opt-out page where you can learn more about NAI members who deliver tailored online ads and your choices to opt-out of receiving them. To learn more about this tool and how it works, please scroll down to read More Info.

### Manage My Browser's Opt Outs

Select "Manage My Browser's Opt Outs" to see which participating NAI members may be engaging in Interest-Based Advertising on this browser and to choose which members' IBA activities you wish to opt out of.

### Learn About Mobile Device Opt Outs

Select "Learn About Mobile Device Opt Outs" to learn more about Cross-App Advertising and to opt your device out of receiving ads tailored to your interests.

### Learn About Internet Connected TV Choices

Select "Learn About Internet Connected TV Choices" to learn more about consumer choice mechanisms on various connected devices.

### Opt Out of Audience Matched Advertising

Select "Opt Out of Audience Matched Advertising" to opt out from participating NAI members engaging in Interest-Based Advertising using your email.

**The NAI opt-out page is provided as a convenience to the public, but the opt-out cookie is set by participating NAI members, who are solely responsible for setting opt-out cookies and honoring your requests. Because no technology is perfect, neither NAI nor its members warrant that the opt-out tool will be error-free or always work as intended. As a condition of offering this page, NAI expressly disclaims any and all liability whatsoever and however caused arising out of or relating to your use of this page or the actions or inactions of NAI members.**

*Photo: NAI webpage informing consumers of their opt-out options and that sending an opt-out request via NAI is not a guarantee that it will be fulfilled.*

If one clicks on the "Opt Out of Audience Matched Advertising" section, consumers are asked to input their email, complete a CAPTCHA, and select which companies they would like to opt-out of. Individuals must open a confirmation email from NAI to then confirm the request. In the case of this research, not all opt-out requests submitted through NAI were successful. Reasons for the declined requests were provided.

While these bulk opt-out mechanisms require minimal information and effort on behalf of the user, they still pose several concerns in regard to their efficacy:

1. Not all companies participate in these bulk opt-out mechanisms, making them non-comprehensive tools. Consumers have to seek out excluded companies individually to submit individual opt-out requests.
2. Both websites do not provide any further confirmation of a successful opt-out aside from a pop-up affirming the request submission. Consumers still have reason to be suspicious that their requests are ineffective or unsuccessful.
3. There is no regulation requiring companies to honor these opt-out signals.

The data brokers included in this study serve the financial industry

The consumer experience of requesting access and deletion to these data brokers is particularly relevant for the CFPB, as many if not all, offer companies the opportunity to use consumer data to market financial products to consumers.

For example, Oracle allows the targeting of ads to those who have conducted searches for student financial aid products, or to “users who have performed actions such as search queries, using financial calculators, and comparing credit card offers, mortgage rates, insurance products and retirement plans”.<sup>141</sup> In a paywalled report, Nielsen describes how “one national bank working with Nielsen used insights on TV programming that skewed to profitable customers and prospects”.<sup>142</sup> LiveRamp discloses that its “direct client list includes many of the world's largest and best-known brands across most major industry verticals, including... financial, insurance and investment services.”<sup>143</sup> TrueData provides targeting segments based on consumer finances and cardholders.

**Figure X. Example of financial segments available on TrueData<sup>144</sup>**

Type	Vertical	Audience Name	Segment Name
Intent	Consumer Financial	American Express	TrueData > Mobile Apps > Finance > American Express
Intent	Consumer Financial	Bank of America Mobile Banking	TrueData > Mobile Apps > Finance > Bank of America Mobile Banking
Intent	Consumer Financial	Binance	TrueData > Mobile Apps > Streaming, Music, and Digital Entertainment > Binance
Intent	Consumer Financial	Capital One	TrueData > Mobile Apps > Finance > Capital One
Intent	Consumer Financial	Cash App	TrueData > Mobile Apps > Finance > Cash App
Intent	Consumer Financial	Chase Mobile	TrueData > Mobile Apps > Finance > Chase Mobile
Intent	Consumer Financial	Coinbase	TrueData > Mobile Apps > Finance > Coinbase
Intent	Consumer Financial	Credit Karma	TrueData > Mobile Apps > Finance > Credit Karma
Intent	Consumer Financial	Discover Mobile	TrueData > Mobile Apps > Finance > Discover Mobile
Intent	Consumer Financial	E*Trade Mobile	TrueData > Mobile Apps > Finance > E*Trade Mobile

The difficulty of accessing, correcting or deleting information held by these companies about consumers is a concern, given these entities’ involvement in the financial services industry.

<sup>141</sup> “Oracle Data Marketplace” (*webpage*), Oracle, available at: <https://docs.oracle.com/en/cloud/saas/data-cloud/data-cloud-help-center/AudienceDataMarketplace/AudienceDataMarketplace.html>

<sup>142</sup> “Financial Services Marketing: Evolving Consumer Relationships,” *Nielsen*, May 2021, Available for download at: <https://www.nielsen.com/insights/2021/financial-services-marketing-evolving-customer-relationships/>

<sup>143</sup> “LIVERAMP HOLDINGS, INC. Management’s Discussion and Analysis of Financial Condition and Results of Operations (form 10-Q),” *MarketScreener*, 7 February 2023, Available at: <https://www.marketscreener.com/quote/stock/LIVERAMP-HOLDINGS-INC-5403911/news/LIVERAMP-HOLDINGS-INC-Management-s-Discussion-and-Analysis-of-Financial-Condition-and-Results-of-42923274/>

<sup>144</sup> “Audience Segments & Taxonomy,” *TrueData*, Archived 13 July 2023: <https://web.archive.org/web/20230713203932/https://www.truedata.co/audience-segments-and-taxonomy/>

# Appendices

**Additional resources for the Bureau’s consideration can be found here:**

[Comment to the FTC on its ANPR on commercial surveillance and data security](#) filed by U.S. PIRG, November 2022

[Comment to the FTC on its ANPR on commercial surveillance and data security](#), filed by Center for Digital Democracy and Fairplay, November 2022

[Comment to CFPB on Big Tech Payment Platforms](#) filed by U.S. PIRG and Center for Digital Democracy, December 2021

[Comment to the CFPB to issue regulations and safeguards for mobile and digital financial services and privacy](#) filed by U.S. PIRG and Center for Digital Democracy, September 2014

[Selling Consumers Not Lists: The New World of Digital Decision-Making and the Role of the Fair Credit Reporting Act](#), Suffolk University Law Review, Ed Mierzwinski and Jeff Chester, February 2014.

**Figure 1. Internet Advertising Bureau's Seller Defined Audience tags that have direct or implied information about a consumer’s finances**

<b>IAB SDA tags, Education</b>
Demographic   Education & Occupation   Education (Highest Level)
Demographic   Education & Occupation   Primary Education
Demographic   Education & Occupation   Secondary Education
Demographic   Education & Occupation   College Education
Demographic   Education & Occupation   Professional School
Demographic   Education & Occupation   Postgraduate Education
Demographic   Education & Occupation   Undergraduate Education
Demographic   Education & Occupation   Employment Role
Demographic   Education & Occupation   Work from Home
Demographic   Education & Occupation   Director/Managerial
Demographic   Education & Occupation   Homemaker / Domestic Work
Demographic   Education & Occupation   Office Worker
Demographic   Education & Occupation   Part-Time Worker
Demographic   Education & Occupation   Professional

Demographic   Education & Occupation   Public Sector
Demographic   Education & Occupation   Retired
Demographic   Education & Occupation   Self Employed
Demographic   Education & Occupation   Shop Worker
Demographic   Education & Occupation   Skilled/Manual Work
Demographic   Education & Occupation   Student
Demographic   Education & Occupation   Unemployed
Demographic   Education & Occupation   Employment Sector / Industry
Demographic   Education & Occupation   Employment Status
Demographic   Education & Occupation   Retired
Demographic   Education & Occupation   Student
Demographic   Education & Occupation   Employed
Demographic   Education & Occupation   Part-Time
Demographic   Education & Occupation   Full-Time
Demographic   Education & Occupation   Self-Employed
Demographic   Education & Occupation   Unemployed / Job Seeker
Demographic   Education & Occupation   Unemployed

<b>IAB SDA tags, Household Income</b>
Demographic   Household Data   Household Income (USD)
Demographic   Household Data   Less than \$10,000
Demographic   Household Data   \$10,000-\$14,999
Demographic   Household Data   \$15,000-\$19,999
Demographic   Household Data   \$20000 - \$39999
Demographic   Household Data   \$40000 - \$49999
Demographic   Household Data   \$50000 - \$74999
Demographic   Household Data   \$75000 - \$99999
Demographic   Household Data   \$100000 - \$149999
Demographic   Household Data   \$150,000-\$174,999
Demographic   Household Data   \$175,000-\$199,999
Demographic   Household Data   \$200,000-\$249,999
Demographic   Household Data   \$250,000+

**IAB SDA tags, Median Home Value**

Demographic | Household Data | Median Home Value (USD) |

Demographic | Household Data | \$0-\$99,999 |

Demographic | Household Data | \$100,000-\$199,999 |

Demographic | Household Data | \$200,000-\$299,999 |

Demographic | Household Data | \$300,000-\$399,999 |

Demographic | Household Data | \$400,000-\$499,999 |

Demographic | Household Data | \$500,000-\$599,999 |

Demographic | Household Data | \$600,000-\$699,999 |

Demographic | Household Data | \$700,000-\$799,999 |

Demographic | Household Data | \$800,000-\$899,999 |

Demographic | Household Data | \$900,000-\$999,999 |

Demographic | Household Data | \$1,000,000+ |

**IAB SDA tags, Monthly Housing Payment**

Demographic | Household Data | Monthly Housing Payment (USD) |

Demographic | Household Data | 0 |

Demographic | Household Data | \$1-\$499 |

Demographic | Household Data | \$500-\$999 |

Demographic | Household Data | \$1,000-\$1,499 |

Demographic | Household Data | \$1,500-\$1,999 |

Demographic | Household Data | \$2,000-\$3,000 |

**IAB SDA tags, Housing Type**

Demographic | Household Data | Ownership |

Demographic | Household Data | Home Owners |

Demographic | Household Data | Renters |

Demographic | Household Data | Owner |

Demographic | Household Data | Renter |

Demographic | Household Data | First Time Homeowner |

Demographic | Household Data | Property Type |

Demographic | Household Data | Multiple Family |

Demographic | Household Data | Single Family |

<b>IAB SDA tags, Income</b>		
Demographic	Personal Finance	Income (USD)
Demographic	Personal Finance	\$10,000-\$14,999
Demographic	Personal Finance	\$15,000-\$19,999
Demographic	Personal Finance	\$20000 - \$39999
Demographic	Personal Finance	\$40000 - \$49999
Demographic	Personal Finance	\$50000 - \$74999
Demographic	Personal Finance	\$75000 - \$99999
Demographic	Personal Finance	\$100000 - \$149999
Demographic	Personal Finance	\$150,000-\$174,999
Demographic	Personal Finance	\$175,000-\$199,999
Demographic	Personal Finance	\$200,000-\$249,999
Demographic	Personal Finance	\$250,000+

<b>IAB SDA tags, "Personal Level Affluence"</b>		
Demographic	Personal Finance	Personal Level Affluence (USD)
Demographic	Personal Finance	Less than \$10,000
Demographic	Personal Finance	\$10,000-\$14,999
Demographic	Personal Finance	\$15,000-\$19,999
Demographic	Personal Finance	\$20000 - \$39999
Demographic	Personal Finance	\$40000 - \$49999
Demographic	Personal Finance	\$50000 - \$74999
Demographic	Personal Finance	\$75000 - \$99999
Demographic	Personal Finance	\$100000 - \$149999
Demographic	Personal Finance	\$150,000-\$174,999
Demographic	Personal Finance	\$175,000-\$199,999
Demographic	Personal Finance	\$200,000-\$249,999
Demographic	Personal Finance	\$250,000-\$500,000
Demographic	Personal Finance	\$500,000-\$1,000,000
Demographic	Personal Finance	\$1,000,000+

<b>IAB SDA tags, "Personal Level Affluence" Band</b>		
Demographic	Personal Finance	Personal Level Affluence Band

Demographic   Personal Finance   Negative Net Worth
Demographic   Personal Finance   Very Low Net Worth
Demographic   Personal Finance   Low Net Worth
Demographic   Personal Finance   Mid Net Worth
Demographic   Personal Finance   High Net Worth
Demographic   Personal Finance   Super High Net Worth

<b>IAB SDA tags, Purchase Intent for Finance and Insurance products</b>
Purchase Intent*   Finance and Insurance
Purchase Intent*   Finance and Insurance   Accountants
Purchase Intent*   Finance and Insurance   Banking
Purchase Intent*   Finance and Insurance   Bookkeepers
Purchase Intent*   Finance and Insurance   Credit and Debt Repair/Credit Reporting
Purchase Intent*   Finance and Insurance   Credit Cards
Purchase Intent*   Finance and Insurance   Insurance
Purchase Intent*   Finance and Insurance   Auto Insurance
Purchase Intent*   Finance and Insurance   Home Insurance
Purchase Intent*   Finance and Insurance   Life Insurance
Purchase Intent*   Finance and Insurance   Medical Insurance
Purchase Intent*   Finance and Insurance   Mortgage Lenders and Brokers
Purchase Intent*   Finance and Insurance   Payday and Emergency Loans
Purchase Intent*   Finance and Insurance   Retirement Planning
Purchase Intent*   Finance and Insurance   Stocks and Investments
Purchase Intent*   Finance and Insurance   Student Financial Aid
Purchase Intent*   Finance and Insurance   Tax Preparation Services

**Figure 2. The IAB’s internal guide to “Purchase Scores” assigned to consumers and used in the targeting of ads for a huge array of products and services**

<b>Code</b>	<b>Description</b>
<b>Past Purchase Recency</b>	
PIPR1	<1 day
PIPR2	<7 days
PIPR3	<14 days
PIPR4	<21 days
PIPR5	<1 month
PIPR6	<6 months
PIPR7	<12 months
PIPR8	>12 months
<b>Past Purchase Frequency</b>	
PIPF1	Infrequent Purchaser
PIPF2	Moderate Purchaser
PIPF3	Frequent Purchaser
<b>Past Purchase Value</b>	
PIPV1	Low Spender
PIPV2	Average Spender
PIPV3	High Spender
<b>Future Buyer Intent</b>	
PIFI1	Low
PIFI2	Medium
PIFI3	High

**Table 2. The 32 data brokers included in analysis of access, correction, deletion and opt-out processes**

Acxiom
Cardlytics
Cience GO Data
Cloudera
Corelogic
Criteo
Data Axle
DataLab
Epsilon Data Management
ID Analytics
ID5
KBM Group
LiveRamp
Lotame
Magnite
mParticle
Nielsen
OpenX
Oracle BlueKai
Outbrain
PubMatic
PulsePoint
Quantcast
Rokt
Salesforce
Sensibill (Q2)
Snowflake
theTradeDesk
TrueData
Vendigi
Xandr
Zeta Global

## Appendix B

### Retail media networks

Many consumer-facing companies have recently begun exploiting their first party data. Companies with direct relationships with customers have realized they're sitting on valuable troves of information.<sup>145</sup> As the data broker Epsilon puts it in a blog post, this demise of third party data “presents a timely opportunity for retailers: an increase in value for first-party data”.<sup>146</sup>

In order to capitalize on first party data, a significant number of consumer-facing companies are blending the role of retailer, data broker and advertising platform (“media publisher”) all in one, by establishing what’s called retail media networks. Retail media networks are advertising platforms owned by a retailer with first party relationships with its customers. Here, retailers can sell or otherwise make available their customers’ first party data to advertisers for targeting ads on the channels that the retailer owns<sup>147</sup>, or on other channels across the web.<sup>148</sup>

Many consumer-facing businesses have established retail media networks. Best Buy<sup>149</sup>, Target<sup>150</sup>, WalMart<sup>151</sup>, Lowe’s<sup>152</sup>, Kohl’s<sup>153</sup>, Kroger<sup>154</sup>, Dollar Tree<sup>155</sup>, Marriott,<sup>156</sup> CVS<sup>157</sup>, Macy’s<sup>158</sup>,

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<sup>145</sup> R.J. Cross, U.S. PIRG, “The new data brokers: retailers, rewards apps & streaming services are selling your data”, 19 August 2022, available at: <https://pirg.org/articles/the-new-data-brokers-retailers-rewards-apps-streaming-services-are-selling-your-data/>.

<sup>146</sup> “The rise of the retail media network” (*blog*), Epsilon, 24 June 2021, available at: <https://www.epsilon.com/us/insights/core-content/the-rise-of-the-retail-media-network>.

<sup>147</sup> “Retail media networks: Co-op advertising gets smarter” (*blog*), Epsilon, 29 January 2021, available at: <https://www.epsilon.com/us/insights/blog/retail-media-networks-co-op-advertising-gets-smarter>.

<sup>148</sup> Criteo, “The all-in-one self-service platform for buying retail media at scale” (*web page*). Accessed on 21 October 2022 at: <https://www.criteo.com/products/retail-media-for-brands/>

<sup>149</sup> BestBuy Ads (*webpage*), archived on 16 August 2022: <https://web.archive.org/web/20220816160225/https://www.bestbuyads.com/meet.html>

<sup>150</sup> David Doty, “Walmart, Target, And Other Mega Retailers Leverage First-Party Data to Become New Media Giants”, *Forbes*, 26 April 2022, available at: <https://www.forbes.com/sites/daviddoty/2022/04/26/walmart-target-and-other-mega-retailers-leverage-first-party-data-to-become-new-media-giants/>

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

<sup>153</sup> “Kohl’s Expands Advertising Opportunities with Kohl’s Media Network” (*press release*), Kohl’s, 21 July 2022, available at: <https://investors.kohls.com/news-releases/news-details/2022/Kohls-Expands-Advertising-Opportunities-with-Kohls-Media-Network/default.aspx>.

<sup>154</sup> David Doty, “Walmart, Target, And Other Mega Retailers Leverage First-Party Data to Become New Media Giants”, *Forbes*, 26 April 2022, available at: <https://www.forbes.com/sites/daviddoty/2022/04/26/walmart-target-and-other-mega-retailers-leverage-first-party-data-to-become-new-media-giants/>

<sup>155</sup> Shoshana Wodinsky, “Why Every Company Is an Ad Company Now”, *Gizmodo*, 17 May 2022, available at: <https://gizmodo.com/why-every-company-ad-network-now-1848936157>

<sup>156</sup> Ibid.

<sup>157</sup> Ibid.

<sup>158</sup> Peter Adams, “Inside Macy’s plan to scale its budding retail media business”, *MarketingDive*, 21 March 2022, available at: <https://www.marketingdive.com/news/inside-macys-plan-to-scale-its-budding-retail-media-business/620648/>

Albertsons<sup>159</sup>, Sam's Club<sup>160</sup> and Walgreens<sup>161</sup> have all started leveraging their customers' data through retail media networks.

Sometimes a retailer's first party data can be used to target its customers on channels that the retail does *not* own. For example, a company partnering with the AdTech company Criteo can engage in "offsite ads" to target a retailer's customers with ads on other sites.<sup>162</sup>

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<sup>159</sup> David Doty, "Walmart, Target, And Other Mega Retailers Leverage First-Party Data to Become New Media Giants", *Forbes*, 26 April 2022, available at: <https://www.forbes.com/sites/daviddoty/2022/04/26/walmart-target-and-other-mega-retailers-leverage-first-party-data-to-become-new-media-giants/>

<sup>160</sup> Lex Josephs, "Introducing Sam's Club Member Access Platform" (*blog*), 15 June 2022. Available at: <https://corporate.samsclub.com/newsroom/2022/06/15/introducing-sams-club-member-access-platform>

<sup>161</sup> David Doty, "Walmart, Target, And Other Mega Retailers Leverage First-Party Data to Become New Media Giants", *Forbes*, 26 April 2022, available at: <https://www.forbes.com/sites/daviddoty/2022/04/26/walmart-target-and-other-mega-retailers-leverage-first-party-data-to-become-new-media-giants/>

<sup>162</sup> See note 148.