

OXFORD BIOCHRONOMETRICS

Paid Media | Affiliates

Q4 2022

Benchmark Report

(free version)



OXFORD
BIOCHRONOMETRICS
STOP FRAUD STAY RELEVANT



Introduction

If you use affiliate marketing channels or use other traffic sources to generate leads, there are a few questions you need to ask yourself:

- What does a successful campaign mean for you?
- What conversion rate do you expect to see?
- Do different affiliates have similar performance?
- How does affiliate marketing perform at scale?
- Which pricing model is the most cost effective?

At Oxford BioChronometrics, we understand the need to have clear knowledge regarding the performance of each marketing channel. That's why we created this report – so you can answer these questions for yourself based on actual data, not guesswork.

In order to provide you with a tool to drive decisions that will grow your business, we have analyzed tens of millions of clicks and the subsequent generated leads for fraudulent behavior. We use that data to provide you with hard data based on each affiliate, media type and device type.

Real data, actionable results for a better ROI – that's the pledge we make to you.

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Executive Summary

To determine your business' exposure to risks, Oxford BioChronometrics has analyzed tens of millions of clicks and leads generated by our North American clients in the financial services and insurance industries.

Key findings

- No affiliate is free of fraudulent traffic, regardless of size or reputation
- In 2022Q4 sources using botnet traffic have been excluded resulting in lower fraud rates.
- Fraud on desktop decreased significantly by removing botnet sourced traffic, from 38% to 14.5%.
- Fraud on mobile slightly rose from 15% to 19%
- The total (both tiers) click fraud decreases to 15% (from 26%)
- The total (both tiers) submitted lead generation fraud falls to 11% (from 23%)

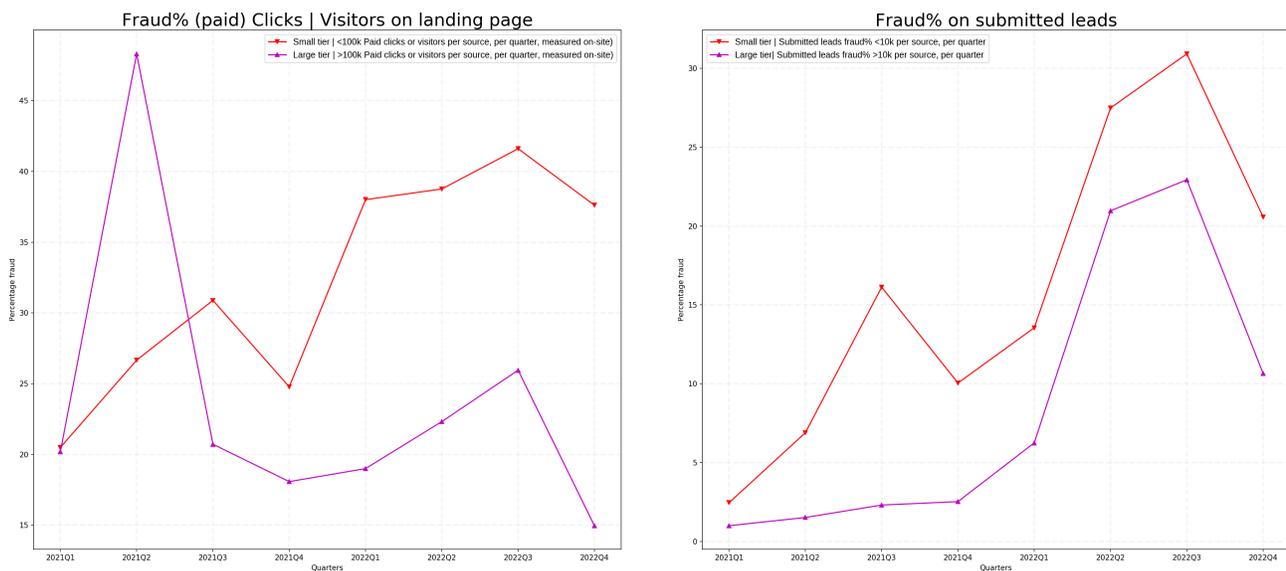
Methods

This report provides a detailed overview of our clients' affiliates ranked by the quality of the clicks and leads provided by them. To create a fair comparison, the affiliates are split in two tiers based on the number of clicks or leads they were able to generate.

The findings of this analysis are published on a quarterly basis.

Fraud Trend by Tier Size

The fraud trend over the last 8 quarters shows an continuing increase in fraudulent clicks in the small tier, currently at 37.7%. The large tier is at 15%. Note: The 2021Q3 click fraud peak is caused by a single source.



However, the number of fraudulent submitted leads was quickly increasing in both small and large tiers. The small tier rapidly increased to its peak of 31% fraud (2022Q3) and the large tier to 23% fraud (2022Q3). Looking in the data reveals that this is the result of botnets emulating desktop traffic, which are able to scale at low cost. In 2022Q4 this has been resolved.

Over time our clients prune poor performing affiliates not just on their fraud levels, but also on the conversion to sales ratio. We cannot guarantee that these numbers will reflect your ratios.

Methodology

This report combines research and frontline experience to identify threats and trends that are meaningful to organizations to make long-term growth strategies.

The data for this report has been collected at landing pages and lead generation forms of Oxford BioChronometrics' clients. The results are comprised of tens of millions of genuine and fraudulent clicks, and millions of form submissions as seen during the fourth quarter of 2022.

The Oxford BioChronometrics team of experts consists of dedicated security consultants, data scientists and researchers conducting research on our clients' traffic. This report shares their findings and insight to provide a ranking of affiliates.

The Q4 2022 Affiliate Benchmark Report is representative of Oxford BioChronometrics clients in North America. We make no claims that our benchmark results can be extrapolated to get the performance of an affiliate at large.

Fraud Landscape

Digital lead generation is supposed to make it easier and more efficient to grow your business. Whether you do this in-house or by outsourcing lead generation to affiliates, monitoring the quality of clicks and generated leads is critical to keeping your data clean. Clean data ensures continuous business growth in changing market conditions.

Proper monitoring means third-party verification of those clicks and leads so that only verified leads are sent to your customer data platform. Filtering out fraudulent leads means your customer data is actionable. It also allows you to immediately return a fraudulent lead to your affiliate so you will not be charged for it.

Our analysis of the clicks and leads reveals the quality of:

- Clicks per source (which can be an affiliate)
- Leads per source (which can be an affiliate), and
- Traffic per device type (desktop vs mobile)
- Conversion ratio (clicks to leads)

Fraud Landscape

What is click fraud?

Click fraud occurs when bots click on your advertisements in order to get attribution. It can also be the result of a competitor clicking on your advertisements to waste your marketing budget.

What is lead generation fraud?

Lead generation fraud occurs when bots or low paid workers fill out lead generation forms with fake or stolen user information bought on the dark web. Since this is real information that is unauthorized to use, these people did not actually provide their consent to be contacted. If it goes undetected, you are at risk of litigation due to violating the TCPA.

What is the cost of fraud?

Fraud costs you real money:

- You paid for fraud because you thought the traffic was genuine
- You polluted your data, which affects your retargeting efforts
- You cannot calculate your actual ROI
- In ecommerce the number of chargebacks will increase due to fraudulent payments
- An increase of chargebacks lowers your reputation at your payment processors, resulting in higher transaction fees to cover these risks
- Both short and long-term strategic planning will be based on faulty insights

Fraud Landscape

Classification of different levels of fraudulent traffic.

1 st level	2 nd level	3 rd level	4 th level
Script bots	Headless browsers without interaction	Headful browsers with interaction	Low paid workers using proxies/VPNs
Only use a few IP addresses to execute thousands of visits	Headless browsers are able to maintain cookies and execute JavaScript. Leveraging this enables fraudsters to build profiles and targeted click on ads	User interaction is emulated by moving the mouse, scrolling and clicking links to navigate	Rotate through large number of device fingerprints with matching user agents, each generating only a few hits to avoid detection
Easy to detect due to the repetitive nature		Are not able to solve interaction based challenges such as checking a box to continue or completing a CAPTCHA	Randomized curvy mouse movements and mimic other humanlike characteristics such as using 'paste as human' functions to copy/ paste data as if it were typed
		Are able to fill out forms by replaying pre-recorded human behavioral interaction and does have some level of randomization	Bot traffic is blended in with low paid workers traffic. The workers fill out the lead generation forms, the bots replay recorded human behavior such as swipes, mouse movements, zooming, etc. at the landing pages

Level 1 bots

These bots are built for basic web scraping and are generally unable to execute JavaScript. These bots use a small number of IP addresses and user agents. Their purpose is to scrape text information from web pages and present no threat in the lead generation industry.

Level 2 bots

These bots are based on headless browsers such as PhantomJS, or Chrome and/or Firefox browsers controlled by Selenium or Puppeteer. These bots can be identified through the specific browser and device characteristics. When found, these bots are mostly used to run click fraud schemes.

Level 3 bots

These bots are based on full-fledged headful browsers, controlled by Puppeteer, Playwright, etc. These browsers are run with additional plugins to try avoid being detected as bot. They are able to simulate basic interactions, such as simple mouse movements, scrolls and keystrokes. Newer variants are able to use pre-recorded human behavior and stolen data to fill out your forms at scale.

Level 4 hybrid

The fourth level is a hybrid form and consists of interactions between bots and a human workforce. Bots will do the repetitive work like finding specific advertisements to click on in order to get the attribution. Subsequently, the 'state' of the browser is saved and continued by a human using the exact same device profile and state (cookies). This enables the human to continue the session and fill out the lead generation form.



Benchmark: Generated Clicks

Now let's benchmark click results. This is a typical CPC model where you pay for a click on your ad that leads to your landing page. The fraudulent part of the traffic consists of level 2 and level 3 bots.

The affiliates have been split into two tiers, based on the volume of traffic they sent to the landing page:

- affiliates that generated between 1,000 to 100,000 clicks, and
- affiliates that generated more than 100,000 clicks.

Both tiers are ranked by the percentage of fraudulent visits with the lowest fraud percentage at the top.

Benchmark: Clicks <100k

The table below contains only data from affiliates that generated between 1,000 and 100,000 clicks of CPC traffic. All results are measured on the landing pages the ads were directed to.

The type of fraudulent traffic consists of mostly level 2 and level 3 bots.

Affiliate	% genuine traffic	% fraudulent traffic
Affiliate 001	96.49%	3.51%
Affiliate 002	93.68%	6.32%
Affiliate 003	92.80%	7.20%
Affiliate 004	92.36%	7.64%
Affiliate 005	91.90%	8.10%
Affiliate 006	90.75%	9.25%
Affiliate 007	90.11%	9.89%
Affiliate 008	89.98%	10.02%
Affiliate 009	89.81%	10.19%
Affiliate 010	89.63%	10.37%
...
Affiliate 040	44.42%	55.58%
Affiliate 041	42.37%	57.63%
Affiliate 042	39.79%	60.21%
Affiliate 043	30.81%	69.19%
Affiliate 044	22.77%	77.23%
Affiliate 045	16.43%	83.57%
Affiliate 046	11.41%	88.59%
Affiliate 047	5.71%	94.29%
Affiliate 048	3.64%	96.36%
Affiliate 049	0.85%	99.15%

Benchmark: Clicks >100k

The table below contains only data from affiliates that generated more than 100,000 clicks of CPC traffic. All results are measured on the landing pages the ads were directed to.

The type of fraudulent traffic consists mostly of level 2 and level 3 bots.

Affiliate	% genuine traffic	% fraudulent traffic
Affiliate 001	98.57%	1.43%
Affiliate 002	97.64%	2.36%
Affiliate 003	97.22%	2.78%
Affiliate 004	94.00%	6.00%
Affiliate 005	93.19%	6.81%
Affiliate 006	91.54%	8.46%
Affiliate 007	91.46%	8.54%
Affiliate 008	91.45%	8.55%
Affiliate 009	91.20%	8.80%
Affiliate 010	91.07%	8.93%
...
Affiliate 040	74.42%	25.58%
Affiliate 041	74.23%	25.77%
Affiliate 042	71.09%	28.91%
Affiliate 043	60.92%	39.08%
Affiliate 044	47.60%	52.40%
Affiliate 045	42.04%	57.96%
Affiliate 046	42.01%	57.99%
Affiliate 047	39.92%	60.08%
Affiliate 048	5.08%	94.92%
Affiliate 049	3.01%	96.99%

Benchmark: Lead Generation

This benchmark ranks affiliates based on the quality of traffic converted to a lead using a CPL or CPA model. The fraudulent traffic consists of level 3 bots and level 4 hybrid bots.

Here again, affiliates have been split into two tiers, each having its own ranking:

- affiliates that generated between 1,000 and 10,000 leads, and
- affiliates that generated more than 10,000 leads.

Both tiers are ranked by the percentage of clicks converted to a lead with the lowest fraud percentage at the top.

Benchmark: Leads <10k

The table below contains only data of affiliates that generated between 1,000 and 10,000 leads. The conversion percentage shows how many clicks have been converted to a lead. These leads are split into two groups: genuine leads and fraudulent leads. If two affiliates have the same percentage, their volume is used as second ranking criterion.

Affiliate	clicks converted to lead %	% genuine leads	% fraudulent leads
Affiliate 001	44.08%	100.00%	0.00%
Affiliate 002	25.17%	99.95%	0.05%
Affiliate 003	43.26%	99.89%	0.11%
Affiliate 004	21.15%	99.69%	0.31%
Affiliate 005	26.90%	99.31%	0.69%
Affiliate 006	21.15%	99.07%	0.93%
Affiliate 007	10.67%	98.96%	1.04%
Affiliate 008	0.80%	98.73%	1.27%
Affiliate 009	3.50%	98.60%	1.40%
Affiliate 010	23.96%	98.45%	1.55%
...
Affiliate 017	24.71%	96.92%	3.08%
Affiliate 018	1.00%	96.58%	3.42%
Affiliate 019	11.75%	94.69%	5.31%
Affiliate 020	14.50%	39.59%	60.41%
Affiliate 021	17.84%	35.34%	64.66%
Affiliate 022	23.34%	9.59%	60.41%
Affiliate 023	5.26%	7.24%	92.76%
Affiliate 024	2.31%	5.15%	94.85%
Affiliate 025	52.15%	0.82%	99.18%
Affiliate 026	0.51%	0.00%	100.00%

Benchmark: Leads >10k

The table below contains only data of affiliates that generated more than 10,000 leads. The conversion percentage shows how many clicks have been converted to a lead. Subsequently, the leads are split into two groups: genuine leads and fraudulent leads. If two affiliates have the same percentage, their volume is used as second ranking criterion.

Affiliate	clicks converted to lead %	% genuine leads	% fraudulent leads
Affiliate 001	26.31%	99.92%	0.08%
Affiliate 002	11.84%	99.90%	0.10%
Affiliate 003	22.89%	99.83%	0.17%
Affiliate 004	31.82%	99.74%	0.26%
Affiliate 005	1.73%	99.45%	0.55%
Affiliate 006	2.21%	99.45%	0.55%
Affiliate 007	3.47%	99.32%	0.68%
Affiliate 008	2.43%	99.10%	0.90%
Affiliate 009	9.93%	99.09%	0.91%
Affiliate 010	24.31%	99.04%	0.96%
...
Affiliate 032	32.33%	93.00%	7.00%
Affiliate 033	9.78%	86.64%	13.36%
Affiliate 034	38.13%	74.13%	25.87%
Affiliate 035	7.26%	14.35%	85.65%
Affiliate 036	12.44%	7.88%	92.12%
Affiliate 037	22.94%	7.08%	92.92%
Affiliate 038	31.36%	1.51%	98.49%
Affiliate 039	26.46%	1.41%	98.59%
Affiliate 040	4.07%	0.38%	99.62%
Affiliate 041	50.99%	0.35%	99.65%

Benchmark: Click Performance Trends

While any marketer would like to believe that the quality of traffic remains constant, the following pages show just how reliable and consistent affiliates are.

In these charts – which we will add on to every quarter – if an affiliate's line goes down, it means their quality of traffic did, too. If it goes up, it means they improved. And, of course, if it stayed flat, their performance did not change. The top of the list has the least amount of fraud. As you go down the list, the percentage of bots goes up.

What you'll see is why it's important to stay on top of your affiliates and keep tracking their performance.

To make it easy to compare, we have again split the group into two tiers:

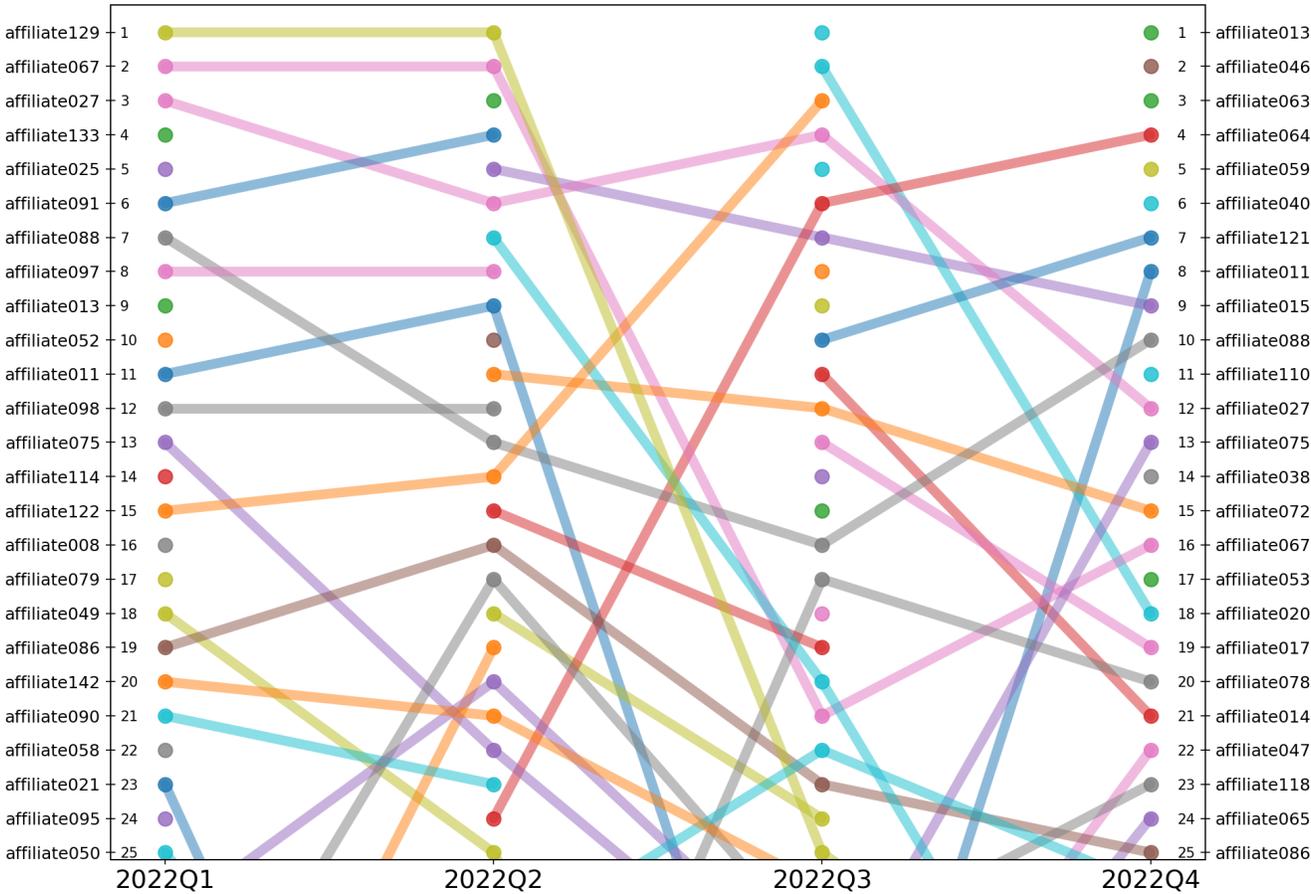
- affiliates that generated between 1,000 and 100,000 clicks, and
- affiliates that generated more than 100,000 clicks.

Follow the lines to see who improved, who got worse and who didn't change at all.

Clicks <100k Performance Trends

Let's compare click performance between Q1, Q2, Q3 and Q4 2022 for affiliates that delivered under 100,000 clicks. Follow the lines to see who improved, who got worse and who didn't change at all. Affiliates are listed from best to worst performance.

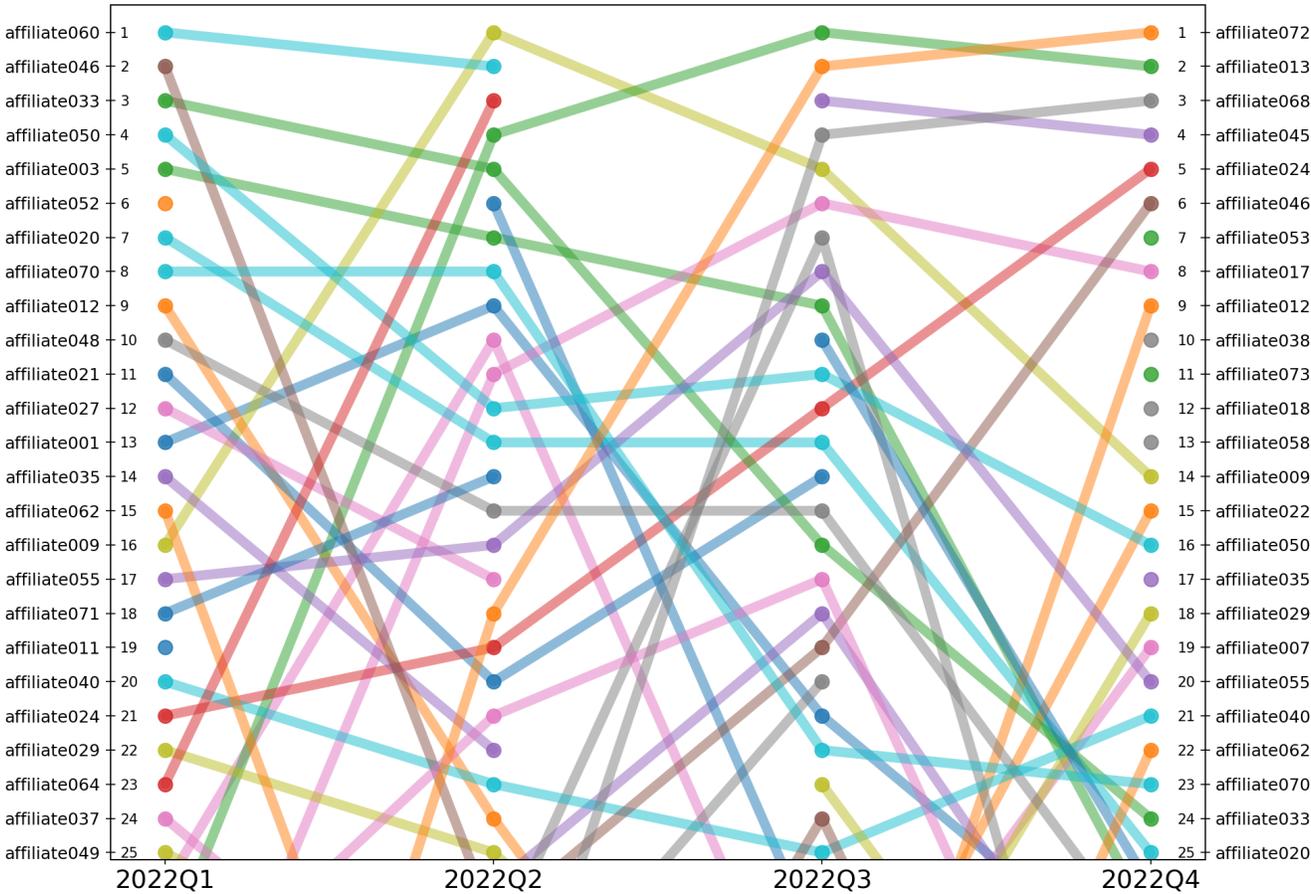
Top 25 affiliates driving <100k clicks per quarter. Ranked by performance



Clicks >100k Performance Trends

Let's compare click performance from between Q1, Q2, Q3 and Q4 2022 for affiliates that delivered over 100,000 clicks. Follow the lines to see who improved, who got worse and who didn't change at all. Affiliates are listed from best to worst performance.

Top 25 affiliates driving >100k clicks per quarter. Ranked by performance



Benchmark: Lead Performance Trends

Just like with clicks, you would like to believe that the quality of leads remains consistent from quarter to quarter. See for yourself how lead performance holds up over time. This benchmark compares the data from this quarter to the previous quarter.

In these charts – which we will add on to every quarter – if an affiliate's line goes down, it means their quality of leads did, too. If it goes up, it means they improved. And, of course, if it stayed flat, their performance did not change. The top of the list has the least amount of lead fraud. As you go down the list, the percentage of fake leads goes up.

What you'll see is why it's important to stay on top of your affiliates and keep tracking their lead performance.

To make it easy to compare, we have again split the group into two tiers:

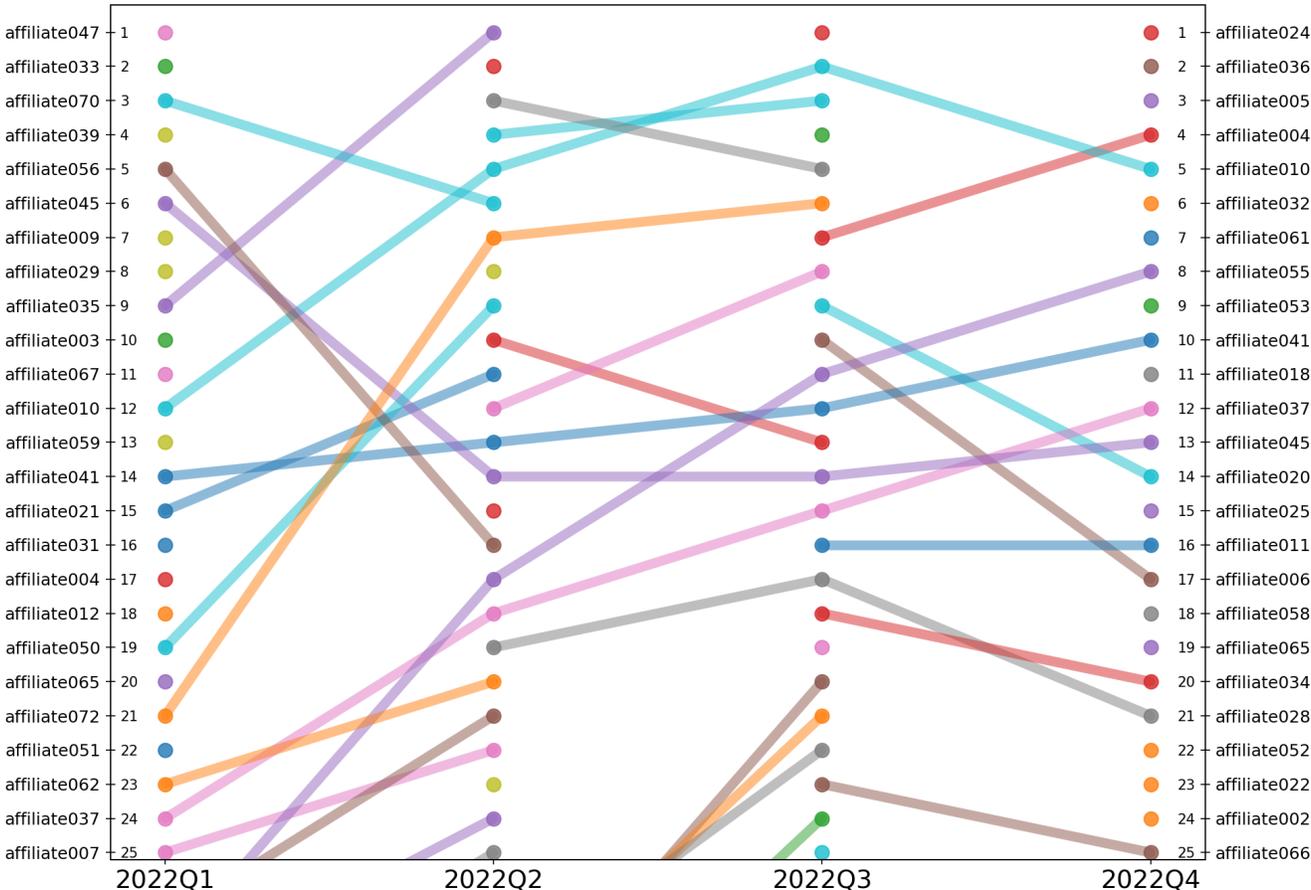
- affiliates that generated between 1,000 and 10,000 leads, and
- affiliates that generated more than 10,000 leads.

Follow the lines to see who improved, who got worse and who didn't change at all.

Leads <10k Performance Trends

Now let's compare lead performance between Q1, Q2, Q3 and Q4 2022 for affiliates that delivered under 10,000 leads. Follow the lines to see who improved, who got worse and who didn't change at all. Affiliates are listed from best to worst performance.

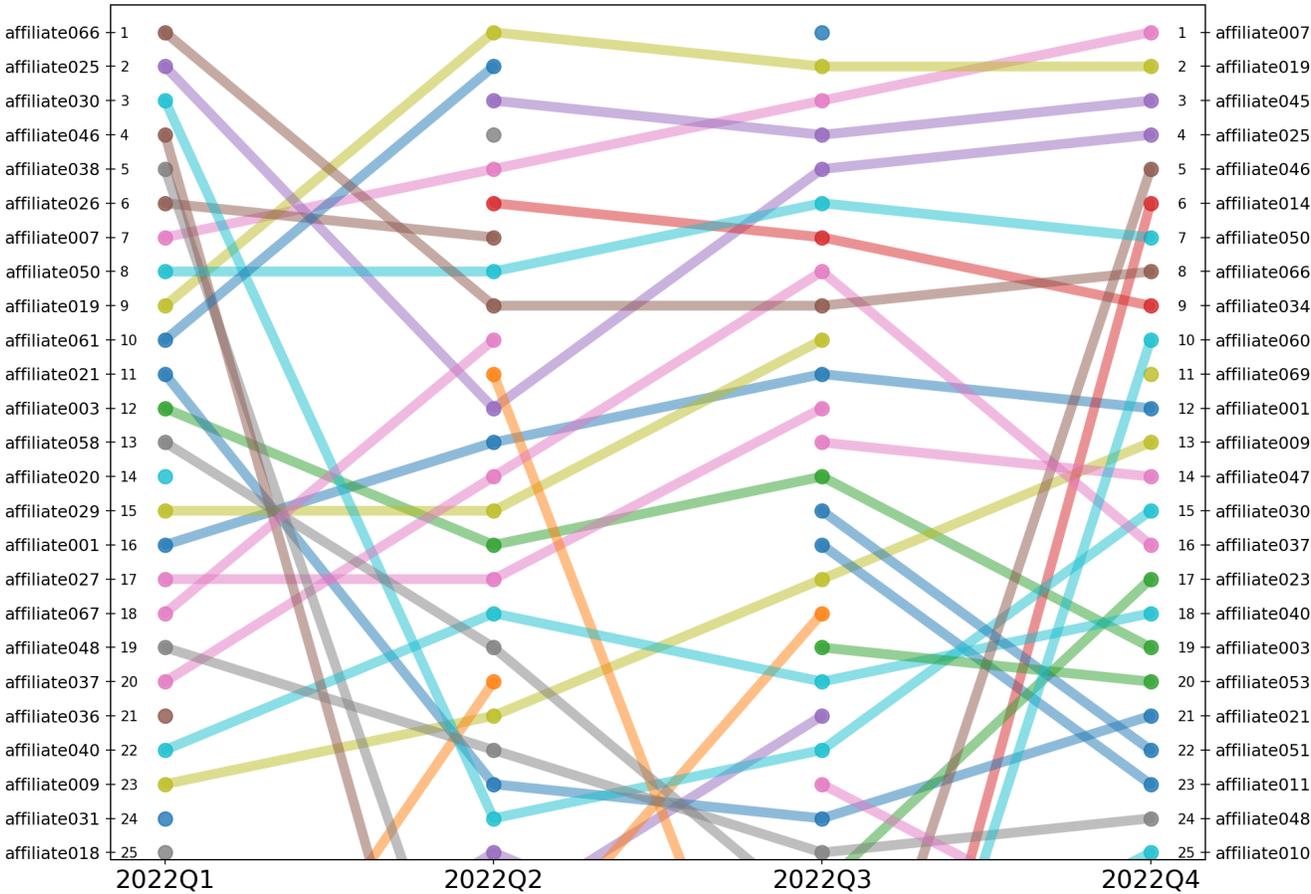
Top 25 affiliates driving <10k leads per quarter. Ranked by performance



Leads >10k Performance Trends

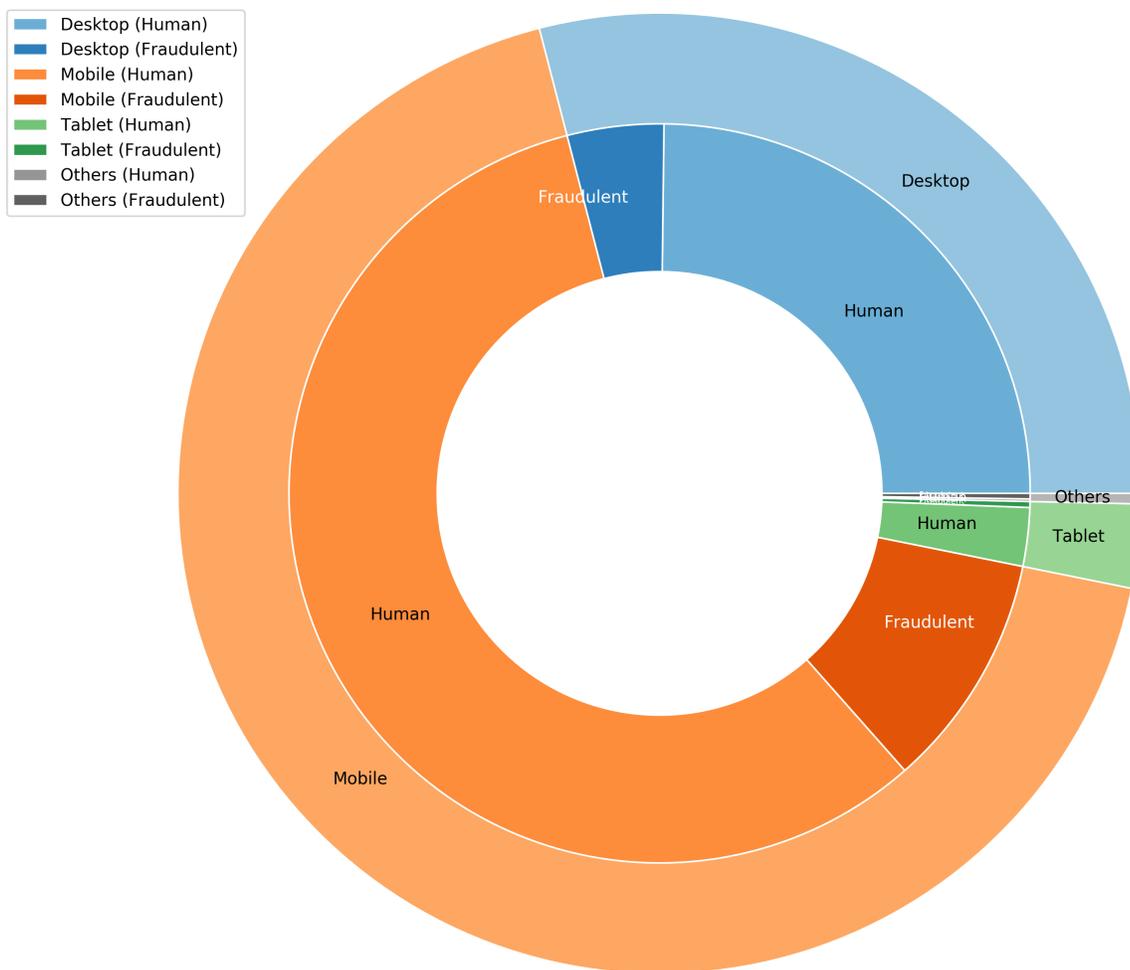
Let's compare lead performance between Q1, Q2, Q3 and Q4 2022 for affiliates that delivered over 10,000 leads. Follow the lines to see who improved, who got worse and who didn't change at all. Affiliates are listed from best to worst performance.

Top 25 affiliates driving >10k leads per quarter. Ranked by performance



Traffic Distribution per Device

This quarter, 68% of the traffic came from mobile devices, and 29% from desktop. The fraudulent traffic from mobile is less more (15%) than in the previous quarter (19%). The fraudulent traffic on desktop went down from (38%) to 14.5%.



The distribution of invalid traffic broken down by device type.

About

Oxford BioChronometrics' award-winning solutions secure your marketing budget by providing a real-time feedback on each generated click or lead. Each month tens of millions of clicks and millions of generated leads are validated and protected by our technology.

Our clients use our fraud detection to see the real customers behind the generated clicks and leads, increase revenue, and take action to improve their marketing ROI.

If you have questions about the content or the numbers in this report you can contact us at: info@oxford-biochron.com.

For more information, please visit www.oxford-biochron.com.

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