

CPA Performance Trends on the Google Display Network



About the Google Display Network

The Google Display Network offers text, image, rich media, and video advertising on Google properties, YouTube, and millions of web, domain, video, gaming, and mobile partner sites. From mass media to niche sites, advertisers can find the most engaged audiences, place ads on the most relevant pages, and achieve performance at scale through our innovative targeting technology. Using our tools, advertisers can build ads, measure results, optimize campaigns, and expand their advertising reach to specific audiences all over the web.

For more information, visit www.google.com/displaynetwork



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Background

The Google Display Network is the world's number one ad network, reaching more than 80% of global internet users and serving more than 6 billion ad impressions each day across hundreds of thousands of websites.¹ Thousands of advertisers use Google AdWords to place ads on the Display Network in addition to their search marketing campaigns on Google.com and the rest of the Google Search Network.²

Because the environment for ads on the Display Network often differs greatly from that of search results pages, advertisers often ask about the differences in performance between the two networks. For many advertisers, two questions in particular are key: how well do ads on the Display Network convert, and how cost-effective is Display Network advertising?

To answer these questions, we analyzed a group of more than 25,000 global accounts with a statistically significant number of Google-tracked conversions on both the Search and Display Networks for a 12-month period ending in November of 2008. The primary metric we examined was cost-per-acquisition (CPA). CPA is a common success metric for many types of campaigns and is often closely tied to overall campaign return on investment (ROI).

Executive Summary

We found that, for advertisers running on both the Search and Display Networks, ads on the Display Network can be as cost-effective as ads on the Search Network.³ We found that the Display Network generally delivers conversion volume that's high enough to noticeably impact the overall revenue driven by AdWords, although there are likely limits to the number of Display Network conversions available at target CPAs.

The median Display Network/Search CPA ratio for advertisers was 97.4% in November 2008. In other words, half of advertisers had a Display Network CPA at least 2.6% lower than their average Search Network CPA. In total, 51.6% of advertisers analyzed had an average Display Network CPA equal to or better than their Search Network CPA. Due in part to Google's smart pricing feature, these medians have remained stable over time.⁴

The Display Network drove nearly one-fifth of total conversions for the median advertiser, indicating that there may be limits to potential conversion volume depending on target CPAs. Globally, the median percentage of conversions driven by the Display Network was 19.6% of the total in November 2008. This statistic varied by advertiser region and spend level, but in all regions and spend levels analyzed, the median percentage was 9.3% or greater.

Finally, we analyzed usage of various Display Network features to understand which campaign management controls drove the best relative performance. Two advanced features in particular have led to improved conversion rates on the Display Network: the Conversion Optimizer, an AdWords feature that automatically optimizes bids in each AdWords auction to manage to CPA targets; and site exclusion, a tool commonly used by advertisers to eliminate poorly performing sites from their Display Network campaigns.

Methodology & Privacy Protections

The data analyzed encompassed more than 1 billion clicks and 70 million clickthrough conversions accrued across the Search and Display Networks by over 25,000 accounts. View-through conversions were not tracked. We analyzed aggregated, anonymous data from advertisers opted into Google's free conversion tracking tool to measure the relative average cost-per-acquisition (CPA), conversion rate (CVR) and cost-per-click (CPC) metrics for the Display Network as compared to the Search Network.

CPA statistics are closely related to CVR and CPC. An advertiser's average cost-per-click (cost/clicks) divided by their average conversion rate (conversions/clicks) will result in their average cost-per-acquisition (cost/conversion). Written as an equation: $CPC/CVR = CPA$.

To protect the privacy of our advertisers' data, we analyzed data in aggregate across data sets where all advertisers contributed equally to the overall analysis. We calculated median ratios so that our findings were not disproportionately influenced by any single advertiser. We also required a minimum of 500 distinct advertisers in each analyzed group to ensure that we reported trends across an advertiser base and didn't provide a view into the performance of either individual advertisers or small subsections of accounts.

In general, we calculated these values using all Search and Display Network advertising statistics in each account, but in cases where we looked at the effectiveness of individual features, we compared the Display Network performance of only the campaigns using those features to aggregated Search Network performance across the account.

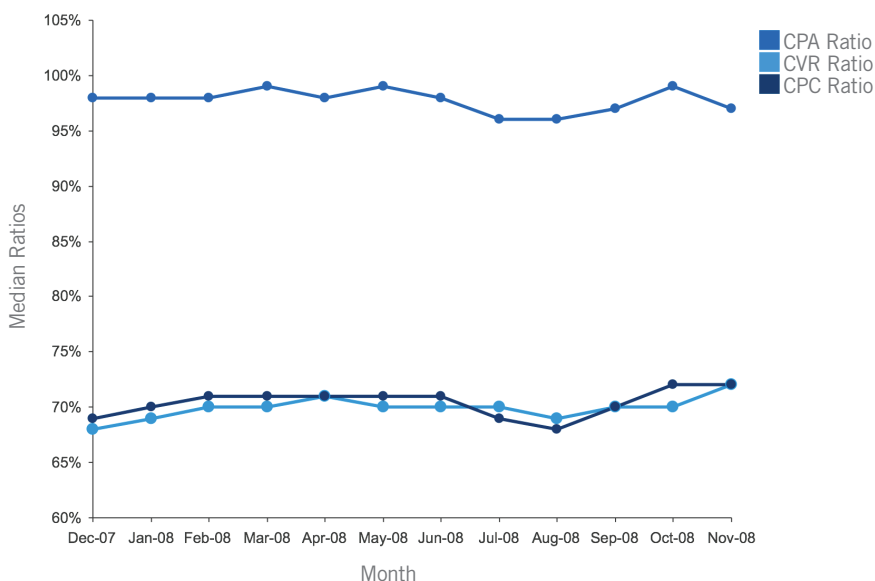
To ensure data integrity, we restricted our analysis to accounts that had accrued at least two conversions on the Search Network and two conversions on the Display Network over a 30-day period. We did not include accounts with either extremely high (>80%) or extremely low (<0.3%) conversion rates in order to exclude accounts that were likely to have installed Google conversion tracking incorrectly.

Detailed Findings

Across all advertisers included in the study, the median Search/Display Network CPA ratio was 97.4% in November 2008. This slightly higher performance was driven primarily by a median Search/Display Network paid CPC ratio of 71.6%, indicating that for the median advertiser, Display Network clicks are on average over 28% cheaper than Search Network clicks. This lowered cost is partially a result of smart pricing, which automatically reduces maximum CPC bids for certain pages in the Display Network based on their likelihood of driving actionable business results.

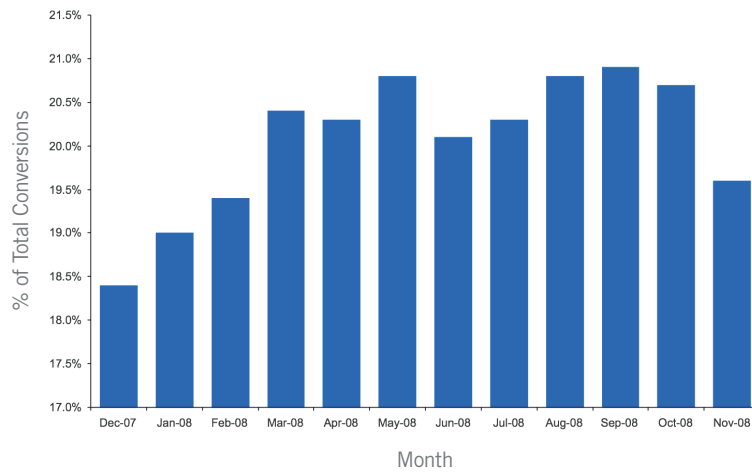
The lower Display Network/Search CPC ratio of 71.6% more than offset a lower overall Display Network/Search CVR ratio of 72.1%, meaning that the median advertiser has an average conversion rate nearly 28% lower on Display Network than on Search. The median Display Network/Search CPA ratio across analyzed accounts has remained stable over time.

Median Display Network/Search Ratios: Cost-Per-Acquisition (CPA), Conversion Rate (CVR) and Cost-Per-Click (CPC)



Over the same period of time, the percentage of overall conversions driven by the Display Network has increased slightly, though we did observe a decrease in November 2008. The median percentage of total conversions grew from 18.4% in December 2007 to 19.6% in November 2008. Over the same period of time, the median number of total conversions per advertiser grew 9.7%, indicating that the number of Display Network conversions has increased along with the median percentage of overall conversions coming from the Display Network.

Display Network Conversions



Performance by Country

Looking at data for eight major markets in North America and Europe, the median Display Network/Search CPA ratio varies as much as 14.8% from country to country in November 2008. At one end of the spectrum, the median advertiser in Canada has an average Display Network CPA 8.6% lower than their average CPA for Search. At the other extreme, the median advertiser in the UK has an average Display Network CPA 6.2% higher than that of search. However, in all cases the median Display Network/Search CPA ratio was no more than 106.2%, and in five of the eight countries analyzed the average Display Network CPA was better than or equal to Search.

Country	Median CPA Ratio	Median CVR Ratio	Median CPC Ratio	Median Content Conversion %
United States	93.8%	73.7%	70.5%	17.9%
Canada	91.4%	75.2%	69.6%	22.7%
United Kingdom	106.2%	71.6%	77.5%	9.3%
Germany	102.9%	72.2%	76.6%	14.6%
France	97.2%	72.9%	72.9%	17.8%
Italy	94.6%	76.2%	74.7%	26.3%
Netherlands	105.1%	68.6%	74.0%	11.6%
Australia	97.8%	76.6%	76.1%	18.2%
Global	97.4%	72.1%	71.6%	19.6%

These results suggest that the opportunity for cost-effective Display Network spending exists in all eight major markets analyzed. However, the three countries analyzed with the largest overall Display Network opportunity appear to be, in order of median CPA ratio, Canada, the United States, and Italy.

Performance by Spend Level

We further broke down the analyzed accounts by spend level to see how advertisers of different sizes performed on the Display Network compared to search. We divided the advertiser base into thirds: small accounts with a monthly spend less than \$1,138; mid-sized accounts with a monthly spend between \$1,138 and \$5,943; and large accounts with a monthly spend over \$5,943.

We found that lower-spending accounts tended to perform better than higher-spending accounts on the Display Network relative to search. This may be due to better overall performance on the Search Network for high-spending advertisers, which sets a higher overall bar for success on the Display Network. For the third of advertisers with the highest monthly AdWords spend, both the relative average CVR and relative average CPC were lower relative to advertisers who spent less.

Spend Level	Median CPA Ratio	Median CVR Ratio	Median CPC Ratio	% of Conversions from Display Network
Highest 1/3	106.2%	62.1%	68.3%	10.8%
Middle 1/3	97.5%	72.1%	71.1%	18.9%
Lowest 1/3	87.9%	83.5%	75.7%	30.0%
All Spend Levels	97.4%	72.1%	71.6%	19.6%

Looking at the data above, there appears to be a greater opportunity for smaller advertisers on the Display Network, since median Display Network/Search CVR ratio drops along with an increase in monthly spend. However, even for the highest one-third of advertisers, the median Display Network/Search CPA ratio was reasonably close to 100% while driving more than 10% of total conversions.

The above data illustrates the importance for larger advertisers who are CPA-focused to evaluate the performance of new campaigns closely, then adjust bids up or down as necessary to achieve the desired balance between conversion volume and CPA to maximize their return on investment (ROI).

Feature Adoption

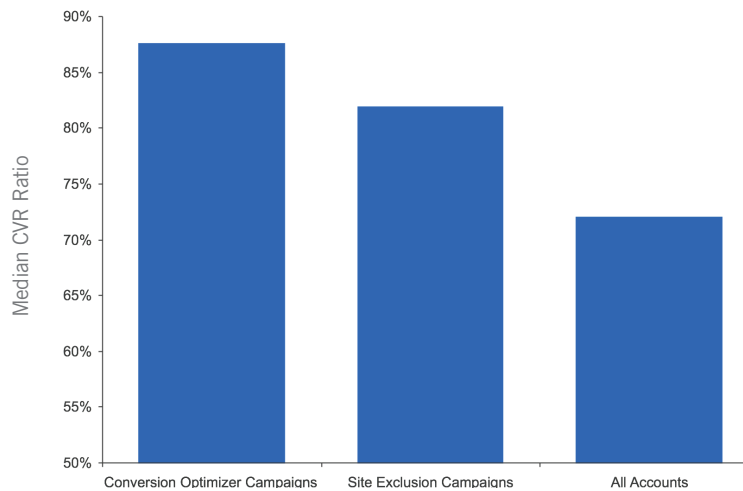
When analyzing feature adoption, we found that campaigns using either the AdWords Conversion Optimizer feature or site exclusion tool had an improved relative conversion rate (CVR) on the Display Network compared to the global median.

Google's Conversion Optimizer is a bidding feature which manages campaigns to a maximum CPA bid, using historical conversion data to predict conversion rates for individual AdWords auctions and avoid unprofitable clicks. The median campaign using Google's Conversion Optimizer feature had a CVR ratio of 87.6%. Since Conversion Optimizer automatically lowers bids for auctions with lower predicted conversion rates, a campaign's delivery on pages that are less likely to convert is reduced, resulting in an overall increase in conversion rate compared to campaigns using manual CPC bidding.

When compared to the median Display Network/Search CVR ratio of 72.1% measured across all accounts, the 87.6% median Display Network/Search CVR ratio represents a 21.5% improvement in relative CVR.

Advertisers using the site exclusion feature also had a higher median conversion rate for the Display Network relative to search. Site exclusion approximates one of the functions of Conversion Optimizer by allowing advertisers to intelligently restrict their delivery to maximize ROI. AdWords advertisers commonly use Placement Performance reports to locate sites with high CPAs, then exclude those sites from ad delivery. Campaigns using site exclusion had a median CVR ratio of 81.9%, or a 13.6% improvement in relative conversion rate.

Relative Display Network CVR (vs. Account-Wide Search Performance)



These higher median ratios were likely due to a number of factors in addition to the adoption of Conversion Optimizer and site exclusion, so it's possible that advertisers who test these features may see less dramatic improvements in conversion rate.

We did not analyze the performance of campaigns using site exclusion and Conversion Optimizer together. Conversion Optimizer is designed to reduce the need for site exclusion, since the tool adjusts bids for individual Display Network pages while managing campaigns to target CPAs. However, if advertisers notice that individual sites are performing poorly in campaigns using Conversion Optimizer they can and should exclude them.

Based on the increased median CVR ratios highlighted above, we can conclude that one way to increase success on the Display Network is for advertisers to closely measure their performance, and focus on tools that help them customize delivery to maximize ROI. With Google AdWords, advertisers can use an automated solution such as Conversion Optimizer, can identify and exclude sites by using Placement Performance reports in conjunction with the site exclusion tool, or can manually set site-level bids in contextually-targeted campaigns.

Conclusions

In November 2008, the median advertiser running on both the Search and Display Networks had a Display Network CPA within approximately 2% of their Search Network CPA, suggesting that these advertisers were able to drive Display Network conversions that were as cost-effective as Search Network conversions.

In addition, the median percentage of total conversions driven by the Display Network was 19.6%, indicating that although the overall volume of Display Network conversions may be limited, it is generally high enough to make a noticeable difference on the amount of business driven by AdWords campaigns.

Though trends differ by region and advertiser spend level, none of the differences were so pronounced as to imply a low potential for cost-effective Display Network conversions in any of the segments analyzed.

Finally, two features in particular appeared to result in higher overall conversion rates: Conversion Optimizer and site exclusion. This suggests that the most effective optimization technique for Display Network advertisers is to modify ad distribution based on measured CPA, either automatically by using the Conversion Optimizer tool, or manually by measuring placement-level performance and excluding poorly-performing sites.

Our analysis evaluated only clickthrough conversion performance, but the value of ads placed next to relevant site content extends beyond direct response advertising. Researchers have found that online ads also drive incremental search volume. A Specific Media study released in December 2008 found that consumers exposed to display ads were, on average, 155% more likely to search for brand- and segment-specific terms.⁵ This study suggests that Display Network advertisers benefit not only from the clickthrough conversions driven by their ads, but also from the increased awareness generated by exposure to a targeted message.

In summary, we can conclude that the Display Network provides a substantial opportunity for conversion-focused advertisers. By using Google's contextual targeting system to place ads next to relevant content, and by managing bids efficiently, advertisers can achieve a Display Network CPA similar to their Search Network CPAs, and do so at scale.

Appendix: Definitions

Definitions for the metrics and AdWords features mentioned in this white paper.

Metrics

Median - One type of average, found by arranging values in order and then selecting the middle value

Cost-per-click (CPC) - The average amount advertisers pay for a click on their ad

Conversion - The number of times paid clicks have led to a business result as defined by an AdWords advertiser; conversion definitions vary by advertiser (purchase, lead, signup, etc.)

Conversion rate (CVR) - The number of conversions divided by the number of ad clicks

Cost-per-acquisition (CPA) - The total cost divided by the total number of conversions

CPA ratio - The median Display Network CPA divided by the median Search Network CPA

AdWords Product Features

Search Network - Search partners who provide search results similar to Google, and who partner with Google to serve AdWords ads on their search results pages

Display Network - A large group of websites and other online products, such as email programs, blogs, and feeds who have partnered with Google to display AdWords ads

Smart pricing - An AdWords feature that automatically reduces maximum CPC bids for certain pages in the Google Network

Conversion tracking - A tool for measuring conversion metrics

Conversion Optimizer - A feature that uses advertisers' conversion tracking data to get them more conversions at a lower cost; it does so by optimizing ad placement in each ad auction to minimize unprofitable clicks and maximize profitable clicks

Site exclusion - Tool that lets advertisers prevent their ads from appearing on individual websites or webpages in the Google Display Network

1. comScore Key Measures, October 2008.

2. Display Network advertisers predominantly use contextual targeting and text ads to advertise on relevant pages across the network. In our analysis of AdWords data from November 2008, 90.3% of the Display Network spend analyzed was generated by campaigns using keywords to contextually target relevant pages, and 86.9% of this same Display Network spend was accrued using text ads. Advertisers who placement-targeted individual sites and/or ran image, flash or rich media ads were also included in our analysis to provide an overall picture of advertiser results across marketing strategies.

3. In our analysis, we looked at the median advertiser in order to best represent the Display Network performance of a typical advertiser. However, not all advertisers will observe the same results, which may vary based on each advertiser's unique circumstances.

4. Our smart pricing feature for Display Network clicks is part of the reason that the median Display Network/Search CPA ratio has changed relatively little over time. Smart pricing uses many factors, such as what keyword lists or concepts triggered an ad, and the type of site on which the ad was served, to discount the cost of clicks for sites that are expected to convert less frequently than Google.com. Consequently, although conversion rates on the Display Network are often lower than conversion rates on search, relative CPA performance on the Display Network in relation to search is preserved.

5. ComScore Ad Effectiveness study for Specific Media for 12-month period ending August 2008.



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