

February 2024

Catchpoint Industry Benchmarks

# Banking Website Performance Benchmark Report

Unveiling the Top Performers and Key Metrics for  
Success based on Comprehensive Website  
Performance Analysis



catchpoint.

# INTRODUCTION

Catchpoint conducted performance analysis on over 50 banking sites to ascertain what constitutes a high-performing site.

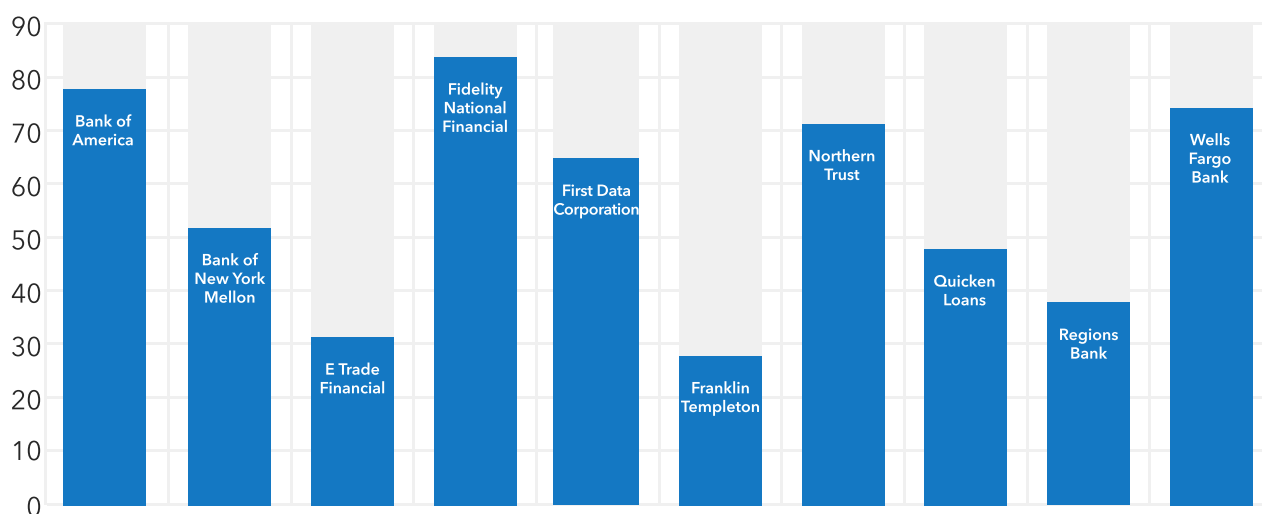
The top three sites on the list were **Franklin Templeton, Bank of New York Mellon Corp and Thrivent Financial**. What is common among these sites is that their numbers with respect to Availability and Performance were well within industry standards allowing the users to have a fast-loading website along with one that is truly available and reliable at all times. Each of these sites took less than 2 seconds to load, with an aggregated availability of approximately 99.9%.

Some of the key metrics that need to be monitored to ensure your websites rank among the top include the following:

- 1 DNS time:** Time taken to resolve the domain name to its corresponding IP address
- 2 Time to First Byte:** The total time from the initial DNS request to receiving the first response packet from the server
- 3 Document Complete:** Time from when the initial URL was issued until the browser triggers the onload event. Document complete does not take into account any dynamic requests that may be called later by a JavaScript
- 4 Webpage response:** Time until the last Byte of the final element on the page is loaded
- 5 Largest Contentful Paint:** Time when the largest content is visible within the view port  
**Cumulative Layout Shift:** Measures the unexpected shifting of webpage elements while the page is still loading
- 6 Availability:** Percentage of time that the website was up and running











# 1. DNS

One critical aspect of delivering a site is first fetching the base HTML, with DNS times being a key component.



Industry standards recommend that DNS times should be less than 50 ms. It's worth noting that the top-performing sites all have DNS times below this threshold.

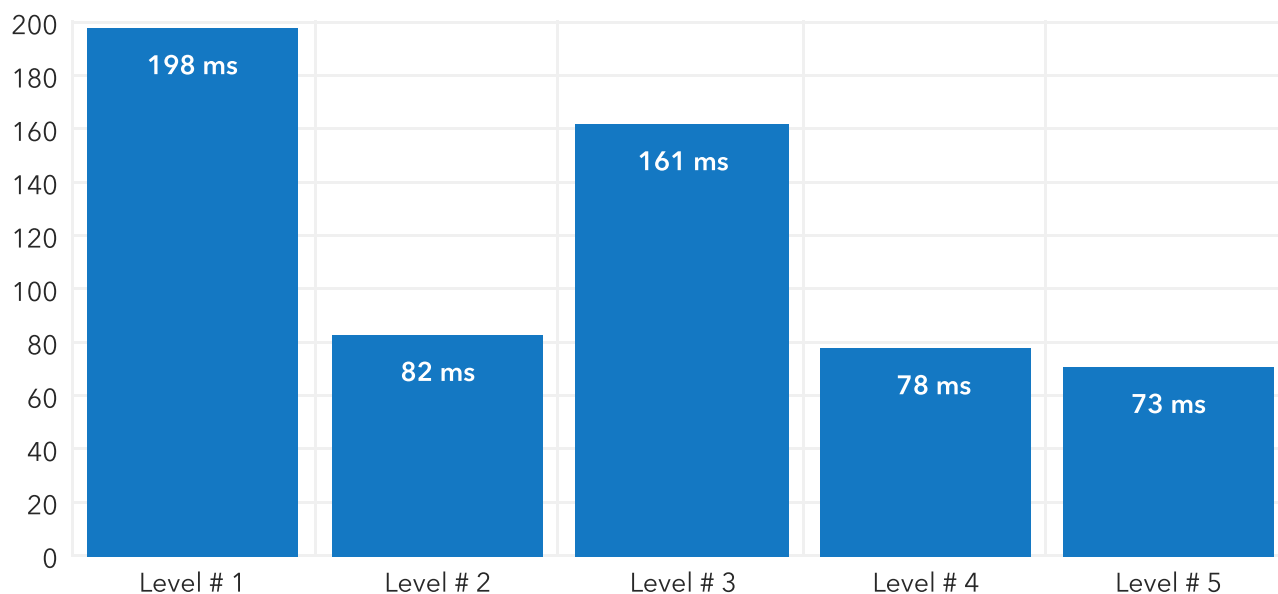
## Top 10 Banks with lowest DNS numbers

 <b>FRANKLIN TEMPLETON</b> <b>27</b> (ms) GM	 <b>REGIONS</b> <b>29</b> (ms) GM	 <b>E*TRADE</b> from Morgan Stanley <b>32</b> (ms) GM	 <b>Quicken Loans</b> <b>48</b> (ms) GM	 <b>BNY MELLON</b> <b>51</b> (ms) GM
 <b>First Data</b> <b>66</b> (ms) GM	 <b>NORTHERN TRUST</b> <b>70</b> (ms) GM	 <b>WELLS FARGO</b> <b>73</b> (ms) GM	 <b>BANK OF AMERICA</b> <b>78</b> (ms) GM	 <b>FIDELITY</b> NATIONAL FINANCIAL <b>84</b> (ms) GM

We see majority of the sites with lower DNS times using Cloudflare as the DNS Providers.

Catchpoint also has explicit DNS tests that enables monitoring the performance of DNS servers and the resolution times at individual levels of resolutions

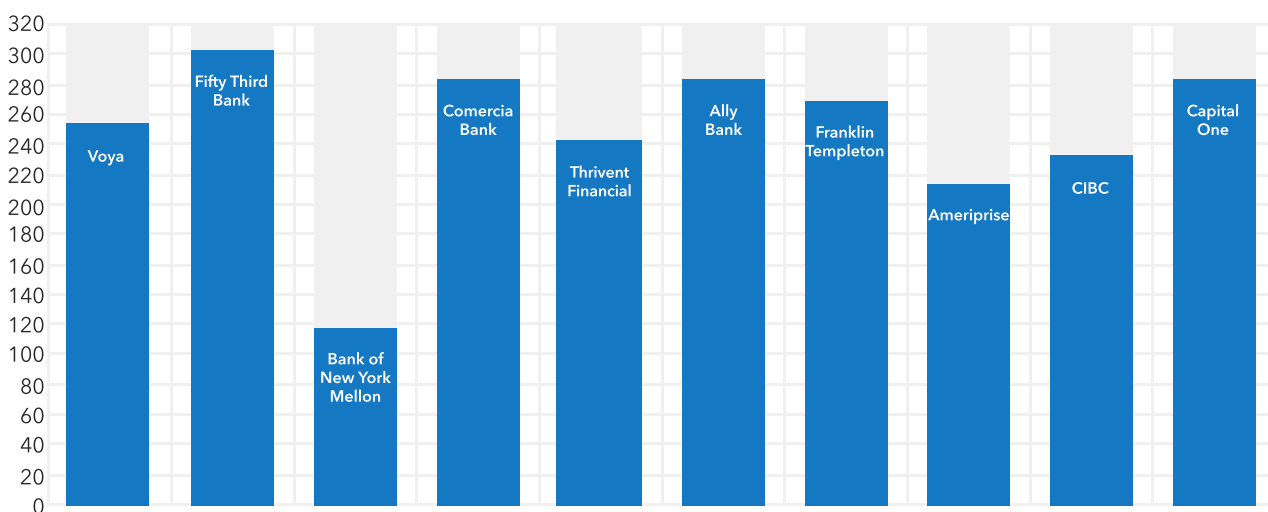
## Results of DNS Test













## 2. TIME TO FIRST BYTE

TTFB is important because it helps understand the responsiveness of the server.

Recommended TTFB for a good user experience is about 200 ms.

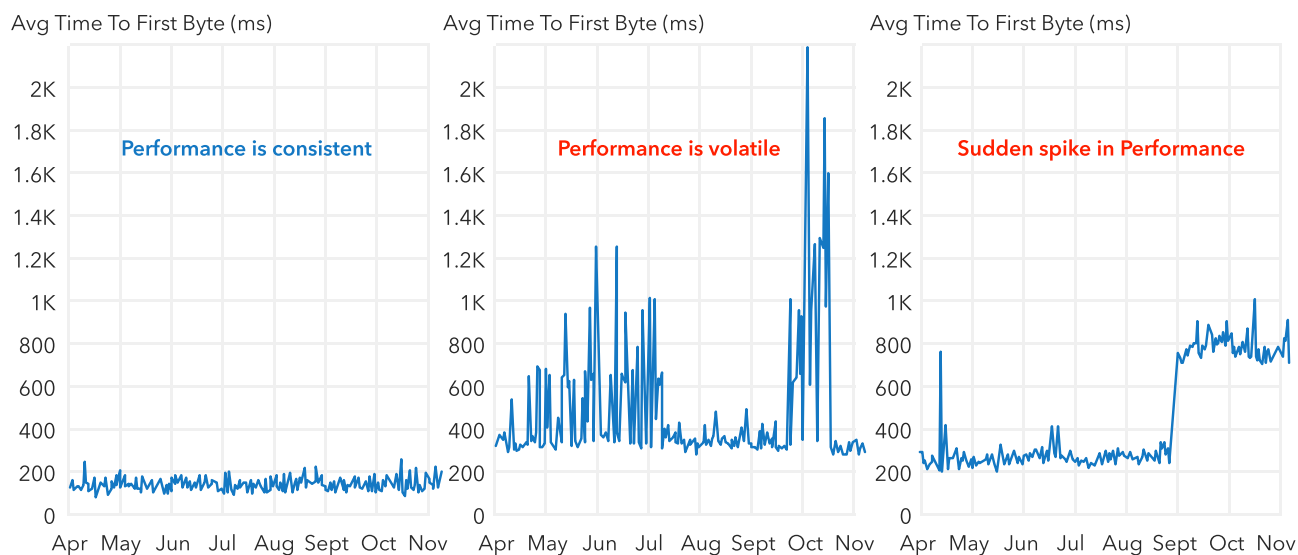


### Top 10 Banks with lowest TTFB numbers

 BNY MELLON <b>119</b> (ms) GM	 Ameriprise Financial <b>213</b> (ms) GM	 <b>231</b> (ms) GM	 <b>246</b> (ms) GM	 <b>256</b> (ms) GM
 FRANKLIN TEMPLETON <b>267</b> (ms) GM	 <b>283</b> (ms) GM	 <b>284</b> (ms) GM	 <b>284</b> (ms) GM	 <b>302</b> (ms) GM

When it comes to performance the key factors that need to be considered are consistency and non-volatility. The snippets below show the performance of three different sites over the last 8 months.

While one site has consistently shown good TTFB numbers, another site exhibits volatility, with sudden spikes and drops in TTFB, while the third shows a drastic spike in TTFB.



The above graph is a proof point on why it is important to have a monitoring tool like Catchpoint, which enables continuous monitoring of your websites and the ability to store historic data to understand trends over a period of time.

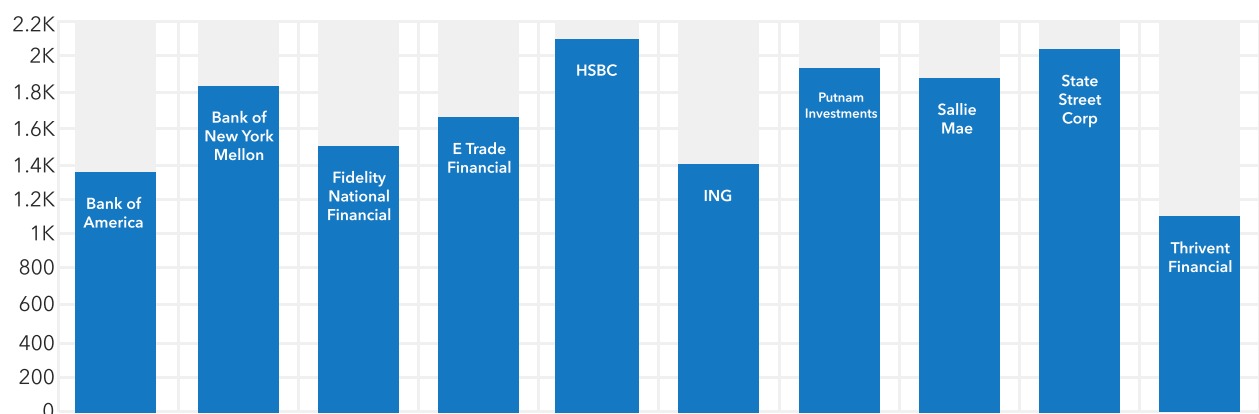
# 3. DOCUMENT COMPLETE

Document Complete signifies the moment when the browser has finished rendering all the HTML, CSS, scripts, images, and other resources necessary for displaying the web page to the user.











A faster Document Complete time generally leads to a better user experience, as users can start interacting with the page sooner, even if some non-essential elements are still loading in the background.

The recommended value for Document Complete would be around 3 seconds.

GM Document Complete (ms)



## Top 10 Banks with lowest Document complete times

 <b>1090</b> (ms) GM	 <b>1350</b> (ms) GM	 <b>1401</b> (ms) GM	 <b>1515</b> (ms GM)	 <b>1691</b> (ms GM)
 <b>1856</b> (ms GM)	 <b>1928</b> (ms GM)	 <b>1956</b> (ms GM)	 <b>2008</b> (ms GM)	 <b>2114</b> (ms GM)

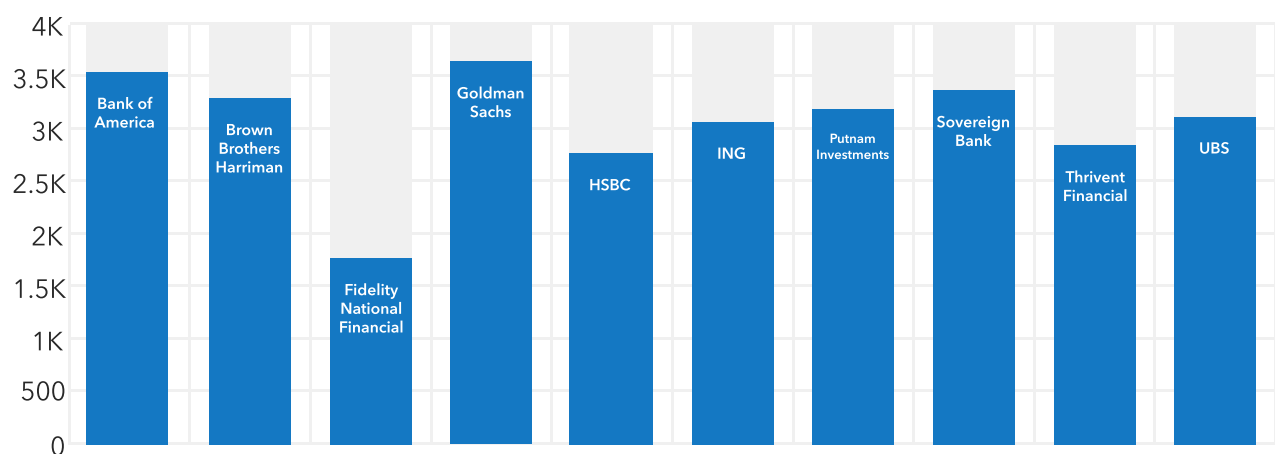
An increase in Document Complete could be attributed to higher response times, or third-party requests with high load times being called before Document Complete.

## 4. WEBPAGE RESPONSE







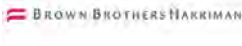



Webpage response measures the time taken to download all content on the page, including any requests made after the onload event.

Industry standards for webpage response ideally fall within the range of 4 to 5 seconds.

GM Webpage Response (ms)



### Top 10 Banks with lowest Webpage response times

 <b>1666</b> (ms) GM	 <b>2746</b> (ms) GM	 <b>2938</b> (ms) GM	 <b>3031</b> (ms GM)	 <b>3050</b> (ms GM)
 <b>3062</b> (ms GM)	 <b>3344</b> (ms GM)	 <b>3398</b> (ms GM)	 <b>3517</b> (ms GM)	 <b>3542</b> (ms GM)

Higher webpage response times can be due to requests with long load times, a high number of requests (fewer requests lead to better response times), and render-blocking elements like JavaScript and CSS.



# 5. CORE WEB VITALS

As of Google's Page Experience update in June 2021, Core Web Vitals are officially considered a ranking factor for websites.

The primary metrics to be considered are LCP (Largest Contentful Paint) and CLS (Cumulative Layout Shift)

## LCP

Largest Contentful Paint



## CLS

Cumulative Layout Shift



Top 10 banks with the lowest LCP numbers - (ms) GM

<b>TD Bank</b> 511	<b>thrivent</b> 801
<b>Putnam INVESTMENTS</b> 917	<b>TIAA</b> 987
<b>ING</b> 1090	<b>STATE STREET</b> 1137
<b>BNY MELLON</b> 1159	<b>UBS</b> 1218
<b>VOYA Financial</b> 1224	<b>Ameriprise Financial</b> 1281











Top 10 banks with the lowest CLS numbers - (ms) GM

<b>Capital One</b> 0	<b>citigroup</b> 0
<b>citi</b> 0	<b>FRANKLIN TEMPLETON</b> 0
<b>ING</b> 0	<b>NATIONAL BANK OF CANADA</b> 0
<b>Sovereign</b> 0	<b>UBS</b> 0
<b>usbank</b> 0	<b>BROWN BROTHERS HARRIMAN</b> 0.01

## 6. AVAILABILITY

Availability is the final piece of the puzzle. High availability ensures that users can access a site reliably at any time.

### Top 10 banks with highest availability

 BNY MELLON 99.98%	 Santander 99.97%	 thrivent 99.97%	 JPMORGAN CHASE & CO. 99.96%	 PNC 99.96%
 CIBC 99.95%	 Putnam INVESTMENTS 99.94%	 BB&T 99.93%	 FIDELITY NATIONAL FINANCIAL 99.9%	 FRANKLIN TEMPLETON 99.9%

- In addition to the above mentioned metrics, other key components that would directly impact the performance of the website is the page weight and the impact of 3rd party requests on the page.
- As a rule of thumb, it is recommended to keep the page as light as possible, since the page weight directly impacts how long it takes for each request to be made and downloaded.
- When it comes to third-party requests, it's critical to continuously monitor their performance to ensure they don't negatively impact the overall page speed.

### Data for Discover.com over the last 30 days

DNS (ms) GM	38.96
Time To First Byte (ms) GM	138.35
Document Complete (ms) GM	3698.8
Webpage Response (ms) GM	5078.88
Largest Contentful Paint (ms) GM	683.75
Cumulative Layout Shift GM	0.35
% Availability	99.93

# ABOUT CATCHPOINT

Catchpoint is the Internet Resilience Company™. The top online retailers, Global2000, CDNs, cloud service providers, and xSPs in the world rely on Catchpoint to increase their resilience by catching any issues in the Internet Stack before they impact their business. Catchpoint's Internet Performance Monitoring (IPM) suite offers web synthetics, internet synthetics, RUM, performance optimization, high fidelity data and flexible visualizations with advanced analytics. It leverages thousands of global vantage points (including inside wireless networks, BGP, backbone, last mile, endpoint, enterprise, ISPs and more) to provide unparalleled observability into anything that impacts your customers, workforce, networks, website performance, applications, and APIs.

Learn more at: <https://www.catchpoint.com/>

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