Weekly COVID-19 Marketplace Rebound Gauge
Travel
Purpose:

To provide an at-a-glance high-level signal about the current commercial viability of our travel marketplace, as compared to times of relative normality. It is a technical analysis agnostic to external indicators and should be treated accordingly.
SLA:

Weekly data refresh
# Marketplace Signals - US

<table>
<thead>
<tr>
<th>Sub-Category</th>
<th>Signal</th>
<th>Signal Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>🟠</td>
<td>Marketplace index has returned to a value of estimated normality. Risk-averse advertisers should re-enter confidently.</td>
</tr>
<tr>
<td>Air Travel</td>
<td>🟠</td>
<td>Marketplace index has reversed its downtrend. Risk tolerant advertisers seeking competitive advantage should re-enter.</td>
</tr>
<tr>
<td>Cruises</td>
<td>🟥</td>
<td>Marketplace index remains in a downtrend.</td>
</tr>
<tr>
<td>Land Transportation</td>
<td>🟠</td>
<td></td>
</tr>
<tr>
<td>Lodging</td>
<td>🟠</td>
<td></td>
</tr>
<tr>
<td>OTA/Meta</td>
<td>🟠</td>
<td></td>
</tr>
<tr>
<td>Traditional Travel Agency</td>
<td>🟠</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>🟠</td>
<td></td>
</tr>
</tbody>
</table>

Data through: 7/05/2020

Data: Microsoft Advertising Internal
Marketplace Rebound Gauge, Short Window

When short term averages crest long term averages, this is a strong signal the marketplace is reversing.

3, 5, 8, 10, 12, 15 day moving averages
30, 35, 40, 45, 50, 55 day moving averages

Data: Microsoft Advertising Internal, Jan 2020 - Present
Marketplace Rebound Gauge, Long Window

When short term averages crest long term averages, this is a strong signal the marketplace is reversing

Activities | Air Travel | Cruise |
Land Transportation | Lodging | OTA/ Meta Engine |
Other | Traditional Travel Agency |

3, 5, 8, 10, 12, 15 day moving averages
30, 35, 40, 45, 50, 55 day moving averages

Data: Microsoft Advertising Internal, Jan 2018 - Present
## Marketplace Signals - International

### Signal Guide

- **Canada**
  - **Signal**: ![Yellow](https://example.com/yellow.png)
  - **Description**: Marketplace index has returned to a value of estimated normality. Risk-averse advertisers should re-enter confidently.

- **France**
  - **Signal**: ![Yellow](https://example.com/yellow.png)
  - **Description**: Marketplace index has reversed its downtrend. Risk-tolerant advertisers seeking competitive advantage should re-enter.

- **Germany**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **Italy**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **Spain**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **United Kingdom**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **Mexico**
  - **Signal**: ![Red](https://example.com/red.png)

- **Brazil**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **Netherlands**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

- **Austria**
  - **Signal**: ![Yellow](https://example.com/yellow.png)

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## Marketplace Signals - APAC

<table>
<thead>
<tr>
<th>Market</th>
<th>Signal</th>
<th>Signal Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td><img src="#" alt="Yellow" /></td>
<td>Marketplace index has returned to a value of estimated normality. Risk-averse advertisers should re-enter confidently.</td>
</tr>
<tr>
<td>India</td>
<td><img src="#" alt="Red" /></td>
<td>Marketplace index has reversed its downtrend. Risk-tolerant advertisers seeking competitive advantage should re-enter.</td>
</tr>
<tr>
<td>Indonesia</td>
<td><img src="#" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td><img src="#" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td><img src="#" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td><img src="#" alt="Yellow" /></td>
<td>Marketplace index remains in a downtrend.</td>
</tr>
<tr>
<td>Vietnam</td>
<td><img src="#" alt="Yellow" /></td>
<td></td>
</tr>
</tbody>
</table>

**Data: Microsoft Advertising Internal**

**Data through:** 7/05/2020
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Australia

India

Indonesia

Singapore

Taiwan

Thailand

Vietnam

3, 5, 8, 10, 12, 15 day moving averages
30, 35, 40, 45, 50, 55 day moving averages

Microsoft Advertising Internal, Data: Jan 2018 - Present
Marketplace Signals - Nordics

<table>
<thead>
<tr>
<th>Market</th>
<th>Signal</th>
<th>Signal Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td><img src="https://example.com/yellow.png" alt="Yellow" /></td>
<td>Marketplace index has returned to a value of estimated normality. Risk-averse advertisers should re-enter confidently.</td>
</tr>
<tr>
<td>Finland</td>
<td><img src="https://example.com/yellow.png" alt="Yellow" /></td>
<td>Marketplace index has reversed its downtrend. Risk-tolerant advertisers seeking competitive advantage should re-enter.</td>
</tr>
<tr>
<td>Norway</td>
<td><img src="https://example.com/yellow.png" alt="Yellow" /></td>
<td>Marketplace index remains in a downtrend.</td>
</tr>
<tr>
<td>Sweden</td>
<td><img src="https://example.com/yellow.png" alt="Yellow" /></td>
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How the signals are extracted
Line of estimated normality:

This is where we estimate the marketplace signal would register on average during the current month under normal circumstances.
Here our cluster of shorter term moving averages has consolidated around the estimated line of normality, pulling latent longer term moving averages with it.

When there is a period with all six short term moving averages above all six long term moving averages, this a confirmed market uptrend.
In this example, we see all six longer term moving averages floating above all six shorter term moving averages suggesting a downtrend.

However, the shorter term moving averages begin to reverse course, and move back through the longer term moving averages. This is an indication that the marketplace is possibly turning around, and a good opportunity for advertisers to re-enter.
In this example, there is a clear negative gap between the **long term moving averages** and the **short term moving averages**, and that gap is increasing.

When the cluster of **short term averages** demonstrates behavior in the opposite direction, it will be time to think about a yellow signal. Until then, this is firmly a downtrend.
What comprises the marketplace index?
Marketplace Index is a composite metric built to reflect the following behaviors:

- Search Volume
- Advertiser Participation
- Auction Activity
- Searcher Intent
A primer on how moving averages work

<table>
<thead>
<tr>
<th>Date</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>3/20</td>
<td>500</td>
</tr>
<tr>
<td>3/21</td>
<td>650</td>
</tr>
<tr>
<td>3/22</td>
<td>700</td>
</tr>
<tr>
<td>3/23</td>
<td>400</td>
</tr>
<tr>
<td>3/24</td>
<td>250</td>
</tr>
<tr>
<td>3/25</td>
<td>300</td>
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<tr>
<td>3/26</td>
<td>425</td>
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<td>3/27</td>
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<td>3/28</td>
<td>525</td>
</tr>
<tr>
<td>3/29</td>
<td>700</td>
</tr>
<tr>
<td>3/30</td>
<td>650</td>
</tr>
<tr>
<td>3/31</td>
<td>825</td>
</tr>
<tr>
<td>4/ 1</td>
<td>900</td>
</tr>
</tbody>
</table>

A simple moving average calculates the average of a selected range of values. For instance, the 3-day moving average for the date of 4/1 would be the average of the attendant values for the dates of 4/1, 3/31, and 3/30.

3 day MA: 791

5 day MA: 720

10 day MA: 547

A simple moving average calculates the average of a selected range of values. For instance, the 3-day moving average for the date of 4/1 would be the average of the attendant values for the dates of 4/1, 3/31, and 3/30.