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.
<table>
<thead>
<tr>
<th>Sub-category</th>
<th>Signal</th>
<th>Signal guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td><img src="image" 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>Air Travel</td>
<td><img src="image" alt="Yellow" /></td>
<td></td>
</tr>
<tr>
<td>Cruises</td>
<td><img src="image" alt="Red" /></td>
<td>Marketplace index has reversed its downtrend. Risk tolerant advertisers seeking competitive advantage should re-enter.</td>
</tr>
<tr>
<td>Land Transportation</td>
<td><img src="image" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Lodging</td>
<td><img src="image" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>OTA/Meta</td>
<td><img src="image" alt="Yellow" /></td>
<td></td>
</tr>
<tr>
<td>Traditional Travel Agency</td>
<td><img src="image" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td><img src="image" alt="Yellow" /></td>
<td></td>
</tr>
</tbody>
</table>

Data through: 9/7/2020
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

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

<table>
<thead>
<tr>
<th>Market</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td><img src="image" alt="Yellow" /></td>
</tr>
<tr>
<td>France</td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Germany</td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Italy</td>
<td><img src="image" alt="Green" /></td>
</tr>
<tr>
<td>Spain</td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>United Kingdom</td>
<td><img src="image" alt="Yellow" /></td>
</tr>
<tr>
<td>Mexico</td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Brazil</td>
<td><img src="image" alt="Red" /></td>
</tr>
<tr>
<td>Netherlands</td>
<td><img src="image" alt="Yellow" /></td>
</tr>
<tr>
<td>Austria</td>
<td><img src="image" alt="Red" /></td>
</tr>
</tbody>
</table>

## Signal guide

- **Marketplace index has returned to a value of estimated normality.** Risk-averse advertisers should re-enter confidently.

- **Marketplace index has reversed its downtrend.** Risk-tolerant advertisers seeking competitive advantage should re-enter.

- **Marketplace index remains in a downtrend**

Data through: 9/7/2020

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## Marketplace signals - APAC

<table>
<thead>
<tr>
<th>Market</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td><img src="38x480" alt="Yellow" /></td>
</tr>
<tr>
<td>India</td>
<td><img src="38x480" alt="Red" /></td>
</tr>
<tr>
<td>Indonesia</td>
<td><img src="38x480" alt="Yellow" /></td>
</tr>
<tr>
<td>Singapore</td>
<td><img src="38x480" alt="Red" /></td>
</tr>
<tr>
<td>Taiwan</td>
<td><img src="38x480" alt="Red" /></td>
</tr>
<tr>
<td>Thailand</td>
<td><img src="38x480" alt="Red" /></td>
</tr>
<tr>
<td>Vietnam</td>
<td><img src="38x480" alt="Red" /></td>
</tr>
</tbody>
</table>

### Signal guide

- **Australia**: Marketplace index has returned to a value of estimated normality. Risk-averse advertisers should re-enter confidently.
- **India**: Marketplace index has reversed its downtrend. Risk-tolerant advertisers seeking competitive advantage should re-enter.
- **Indonesia**: Marketplace index remains in a downtrend.

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Data through: 9/7/2020

Data: Microsoft Advertising Internal
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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

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<thead>
<tr>
<th>Market</th>
<th>Signal</th>
<th>Signal guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td><img src="" alt="Red Circle" /></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="" alt="Red Circle" /></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="" alt="Red Circle" /></td>
<td>Marketplace index remains in a downtrend</td>
</tr>
<tr>
<td>Sweden</td>
<td><img src="" alt="Red Circle" /></td>
<td></td>
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Denmark

Finland

Norway

Sweden

Microsoft Advertising Internal, Jan 2020 - Present
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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

A simple moving average (MA) 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.
Strategies and recommendations
