Daily COVID-19 Insights

July 29, 2020 (market close)
The COVID-19 pandemic may be viewed as impacting financial markets in two waves. The first wave commenced with the outbreak in China in early January 2020 and the second wave began with the global outbreak in late February 2020.

In this daily report, we compare how MSCI factors and industry groups indexes have performed relative to the benchmarks during these two waves of the COVID-19 pandemic commencing Jan. 10 and Feb. 21, 2020, with a focus on the markets below.*

<table>
<thead>
<tr>
<th>Region / Country</th>
<th>Benchmark Index Description</th>
</tr>
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<tbody>
<tr>
<td>Asia ex JP</td>
<td>The MSCI AC Asia ex Japan Index reflects large- and mid-cap representation across two of three developed market countries (excluding Japan) and nine emerging market countries in Asia</td>
</tr>
<tr>
<td>China</td>
<td>The MSCI China Index reflects large- and mid-cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs)</td>
</tr>
<tr>
<td>China A</td>
<td>The MSCI China A Index measures large- and mid-cap representation of local listed China A shares</td>
</tr>
<tr>
<td>Europe</td>
<td>The MSCI Europe Index represents the performance of large- and mid-cap equities across 15 developed countries in Europe</td>
</tr>
<tr>
<td>USA</td>
<td>The MSCI USA Index is designed to measure the performance of the large- and mid-cap segments of US market</td>
</tr>
</tbody>
</table>

*The data presented in this report are limited solely to the recent periods indicated. For information about historical data, please contact your MSCI representative. Past performance is no indication or guarantee of future performance. None of the information or analysis herein is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision or asset allocation and should not be relied on as such.
Benchmark indexes

Region/Country cumulative performance

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Factor indexes
Factor indexes: Minimum Volatility

MSCI Minimum Volatility relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Factor indexes: Momentum

MSCI Momentum relative performance

Days after outbreak

China
China A
Asia ex JP
USA (right axis)
Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Factor indexes: Quality

MSCI Quality relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
**Factor indexes: High Dividend Yield**

MSCI High Div Yld relative performance

Days after outbreak

- **China**
- **China A**
- **Asia ex JP**
- **USA (right axis)**
- **Europe (right axis)**

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Factor indexes: Low Size (Equal Weighted)

MSCI Equal Weighted relative performance

- **China**
- **China A**
- **Asia ex JP**
- **USA (right axis)**
- **Europe (right axis)**

**Day 0:** Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index

*MSCI China A mid-cap Equal Weighted Index used for China A; standard Equal Weighted indexes are used for other regions.*
Industry group indexes
MSCI Automobiles & Components relative performance

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Banks

MSCI Banks relative performance

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
**Industry Group: Capital Goods**

MSCI Capital Goods relative performance

- **Days after outbreak**
- **Day 0:** Jan 10 for Asia and China, Feb 21 for Europe and USA
- Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index

- China
- China A
- Asia ex JP
- USA (right axis)
- Europe (right axis)
Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Consumer Durables & Apparel

MSCI Consumer Durables & Apparel relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
**Industry Group: Consumer Services**

**MSCI Consumer Services relative performance**

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
**Industry Group: Diversified Financials**

**MSCI Diversified Financials relative performance**

- **China**
- **China A**
- **Asia ex JP**
- **USA (right axis)**
- **Europe (right axis)**

**Day 0:** Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Food & Staples Retailing

MSCI Food & Staples Retailing relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Food, Beverage & Tobacco

MSCI Food, Beverage & Tobacco relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Health Care Equipment & Services

MSCI Health Care Equipment & Services relative performance

Days after outbreak

- China
- China A
- Asia ex JP
- USA (right axis)
- Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Household & Personal Products

MSCI Household & Personal Products relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Insurance

MSCI Insurance relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
MSCI Materials relative performance

Days after outbreak

China
China A
Asia ex JP
USA (right axis)
Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Media & Entertainment

MSCI Media & Entertainment relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Pharm, Biotech & Life Sciences

MSCI Pharmaceuticals, Biotechnology & Life Sciences relative performance

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Real Estate

MSCI Real Estate relative performance

Days after outbreak

China
China A
Asia ex JP
USA (right axis)
Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Retailing

MSCI Retailing relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Semi. & Semi. Equipment

MSCI Semiconductors & Semiconductor Equipment relative performance

Days after outbreak

- China
- China A
- Asia ex JP
- USA (right axis)
- Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Software & Services

MSCI Software & Services relative performance

Days after outbreak

China
China A
Asia ex JP
USA (right axis)
Europe (right axis)

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Industry Group: Technology Hardware & Equipment

MSCI Technology Hardware & Equipment relative performance

Days after outbreak

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index

MSCI
MSCI Telecommunication Services relative performance

Days after outbreak:
- China: Jan 10 for Asia and China, Feb 21 for Europe and USA
- Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
MSCI Transportation relative performance

0 20 40 60 80 100 120 140
Days after outbreak

50 60 70 80 90 100

Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA
Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
Day 0: Jan 10 for Asia and China, Feb 21 for Europe and USA

Relative performance against benchmark: MSCI China Index, MSCI China A Index, MSCI AC Asia ex Japan Index, MSCI USA Index, MSCI Europe Index
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<th>ASIA PACIFIC</th>
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<th>China North</th>
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