Silver linings beyond 2019

Developments and outlook for key steel-related industries

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Samuel Champanhet, Senior Principal Economist, Comparative Industry Service
samuel.champanhet@ihsmarkit.com

Hossam Abougabal, Senior Research Analyst, Global Construction Service
hossam.abougabal@ihsmarkit.com
Key messages

• A slowdown in 2019
• A stabilization over the short term
• Still strong fundamentals over the long term
Operating conditions at global steel users are deteriorating
Construction is by far the main buyer

1. Construction (around 50%)
2. Machinery & equipment (around 20%)
3. Motor vehicles (around 10%)
4. Other transportation equipment (Rail & Ships, around 5%)

- Fabricated metal products (including furniture, consumer goods, weapons) (remaining 15%)
CONSTRUCTION
Growth is expected to plateau
Urbanization will support construction over the long term

Percentage of population at mid-year residing in urban areas

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</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>110%</td>
<td>120%</td>
<td>130%</td>
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</tbody>
</table>

Source: UN, Department of Economic and Social Affairs, Population Division (2018).

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Smart cities projects and construction spending

<table>
<thead>
<tr>
<th>Country</th>
<th>Consumer spending growth, CAGR 2020-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>14%</td>
</tr>
<tr>
<td>Canada</td>
<td>12%</td>
</tr>
<tr>
<td>UK</td>
<td>10%</td>
</tr>
<tr>
<td>China</td>
<td>8%</td>
</tr>
<tr>
<td>India</td>
<td>6%</td>
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Number of Smart City Projects, as of 2018

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Industrial machinery
Growth down by a full percentage point over the short term

Global machinery and equipment PMI

Machinery production growth by country
Automation to support spending on heavy machinery

Shipments, year-over-year growth

Source: IHS Markit

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Motor Vehicles
2019 an off-year for the automotive sector

Global PMI for automobiles and parts

Vehicle production growth contribution by country

Source: IHS Markit © 2019 IHS Markit
Car parc stabilizing in advanced economies, still growing in the rest of the world

IHS Markit vehicle parc forecast, million vehicles

Source: IHS Markit © 2019 IHS Markit

Share of electric and hybrid in total light-vehicle engine production

Source: IHS Markit © 2019
China supporting railroad, excess supply in shipbuilding

**Railroad equipment production growth by country**

<table>
<thead>
<tr>
<th>Year</th>
<th>China (Mainland)</th>
<th>United States</th>
<th>Russia</th>
<th>Other countries</th>
<th>Total</th>
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<tbody>
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<td>2018</td>
<td>7.0</td>
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<td>2019</td>
<td>4.3</td>
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<tr>
<td>2020</td>
<td>3.8</td>
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<tr>
<td>2021</td>
<td>3.7</td>
<td></td>
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<tr>
<td>2022</td>
<td>3.7</td>
<td></td>
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</tr>
</tbody>
</table>

Source: IHS Markit

**Shipbuilding production growth by country**

<table>
<thead>
<tr>
<th>Year</th>
<th>China (Mainland)</th>
<th>South Korea</th>
<th>United States</th>
<th>Other countries</th>
<th>Total</th>
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<tbody>
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<tr>
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<tr>
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<td>2.3</td>
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Source: IHS Markit

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Trade growth to keep supporting demand for railroad equipment and ships

Total trade in '000 Tons

Source: IHS Markit

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THANK YOU

Q&A