Record profits versus increasing volatility

Global Automotive Supplier Study

Lazard

Roland Berger
Strategy Consultants

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The current status – Supplier profitability at an all-time high

Executive Summary

> After an excellent 2013, 2014 is expected to become yet another record year for automotive suppliers with a global EBIT margin of ~7.5 percent
> Key drivers of these results are nicely growing vehicle production volumes and positive trends in the segment mix along with high capacity utilization after a 5-year period of strong growth
> Automotive suppliers have – on average – outperformed their OEM customers in terms of profitability – compared to other industries there is still room for improvement though
> Performance varies greatly depending on region, company size, product focus and business model
  > NAFTA-based suppliers are currently more profitable than their European peers
  > Large globally operating suppliers are top of the class
  > Powertrain and tire focused suppliers currently achieve the highest profitability
  > Product innovators are outpacing process specialists
> At the individual supplier level, revenue growth does not naturally correlate with profitability – but one group of top-performing suppliers is managing to grow their business at high margins
> Along with operational performance, many suppliers have substantially improved their liquidity and financing situation and find themselves in a more stable position than in 2007

Source: Roland Berger/Lazard
The short-term challenge – Uncertainty rises as record profitability is set to come to an end

Executive Summary

> The 2015 outlook for the global automotive industry is marked by increasing volatility and uncertainty
> Global light vehicle production is expected to continue its growth over the next two years – but at a much slower pace than before
  – Europe stable at a low level, Japan even declining – and NAFTA will see only moderate growth, having rallied in previous years
  – BRI markets have the potential for growth following difficult years in 2013/2014 – but a risk of further stagnation clearly exists
  – China remains the only major growth driver
> OEMs are facing increasing margin pressure – both from end customer price pressure in most markets and from rising costs for product/production complexity and warranties
> OEMs have kicked off additional cost reduction programs in 2014 – growing friction in OEM-supplier relations (reinforced "pay-to-play"; "pay-to-quote")
> In the short-term, we therefore expect slower growth for the automotive supplier industry – the record profitability of the past five years is expected to come to an end; still, profit margins are expected to remain at a high level
The long-term challenge – An industry structure fundamentally changing

Executive Summary

> The automotive supplier industry is facing a period of constant change – most of the following factors are not fundamentally new; however, the magnitude with which they will have an impact on automotive suppliers is expected to increase significantly
  
  – Continued shift of end customer demand to Asia
  – Ongoing relocation of engineering (China, CEE) and production (new markets beyond BRIC)
  – Market access and technology-driven M&A – with emerging market investors at the forefront
  – Downstream expansion of raw materials providers
  – Technology (r)evolution of the powertrain, driver assistance and connectivity
  – Volatility of currency and capital markets

> Those changes come with a higher of uncertainty – some technology roadmaps are far from being clear, and long-trusted OEM relationships may end up being sacrificed in the battle for new global programs

> As a consequence, the global vehicle component market is still expected to grow – but the structural changes to the industry will redistribute revenue pools across products/domains

> This environment yields an ever higher number of both opportunities and risks for automotive suppliers – those players that focus on the winning product, customer and regional mix could hugely benefit
The conclusion – Key actions for automotive suppliers

Executive Summary

> Short term, the **risk to the individual supplier** of a significant drop in margins is **clearly increasing** – despite the fact that the overall industry profitability is expected to remain at a high level

> Suppliers therefore need to ride the **next wave of efficiency gains** – but without limiting their flexibility to quickly adjust to an ever more uncertain and volatile market development
  
  – Cautiously **monitor market developments** and signals for a **possible downturn**
  – **Drive smart efficiency** improvements (indirect production, overheads,...)
  – **Increase/maintain flexibility** across the entire value chain (production, R&D, purchasing,...)
  – Closely **manage investment decisions** and one-time costs

> At the same time, suppliers need to prepare themselves to **benefit from the industry shift** and mitigate the associated risks in the **mid to long term**
  
  – Regularly **review and adapt defined strategy**
  – Maintain/sharpen **unique selling proposition** with clear technological or process differentiation
  – Focus on product segments with **above-average growth rates and margin potential**
  – Actively **leverage M&A opportunities**
  – Balance **regional structures** (revenue creation, production, R&D, sourcing,...)

Source: Roland Berger/Lazard
A. The current status – Supplier profitability at an all-time high
After an excellent 2013, 2014 is expected to be yet another record year for automotive suppliers globally

Key supplier performance indicators, 2005-2014e (n~600 suppliers)

<table>
<thead>
<tr>
<th>Revenue growth</th>
<th>EBIT$^1$ margin [%]</th>
<th>ROCE$^2$ [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indexed [2005=100]</td>
<td>Y-o-Y [%]</td>
<td>05 06 07 08 09 10 11 12 13 14e</td>
</tr>
<tr>
<td>100 109 119 116 99 118 132 137 148 ~155</td>
<td>9 9 12 4 8 5</td>
<td>6.0 5.7 6.5 2.1 1.8 7.0 6.5 6.9 7.2 ~7.5</td>
</tr>
</tbody>
</table>

1) EBIT after restructuring items  
2) EBIT after restructuring items/capital employed

Source: Company information; analyst forecasts; Roland Berger/Lazard
Key drivers of these results are nicely growing vehicle production volumes in the main markets

Global light vehicle production volume\(^1\) by region, 2010-2014e [m units]

- **NAFTA: CAGR: 9.3%**
  - 2010: 11.9
  - 2011: 13.1
  - 2012: 15.4
  - 2013: 16.2
  - 2014e: 17.0

- **Europe\(^2\): CAGR: 0.5%**
  - 2010: 17.5
  - 2011: 18.1
  - 2012: 16.9
  - 2013: 17.1
  - 2014e: 17.9

- **China: CAGR: 8.0%**
  - 2010: 16.8
  - 2011: 17.3
  - 2012: 18.2
  - 2013: 20.9
  - 2014e: 22.9

- **South America: CAGR: -1.1%**
  - 2010: 4.2
  - 2011: 4.3
  - 2012: 4.3
  - 2013: 4.5
  - 2014e: 4.0

- **World: CAGR: 4.3%**
  - 2010: 74.4
  - 2011: 76.9
  - 2012: 81.5
  - 2013: 84.7
  - 2014e: 88.0

- **Japan/Korea: CAGR: 0.8%**
  - 2010: 13.3
  - 2011: 12.5
  - 2012: 14.0
  - 2013: 13.5
  - 2014e: 13.8

\(1\) Incl. light commercial vehicles

\(2\) Excluding CIS and Turkey

Source: IHS; Roland Berger/Lazard
Recent supplier performance adds up to a 5-year plateau of record margins – Gap between suppliers and OEMs remains constant

OEM and supplier profitability (EBIT margin), 2001-2014e [%]

Y-o-y change in global light vehicle sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Suppliers</th>
<th>OEMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td>2002</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>2003</td>
<td>5.4</td>
<td>5.8</td>
</tr>
<tr>
<td>2004</td>
<td>6.0</td>
<td>4.7</td>
</tr>
<tr>
<td>2005</td>
<td>6.0</td>
<td>4.9</td>
</tr>
<tr>
<td>2006</td>
<td>5.7</td>
<td>5.8</td>
</tr>
<tr>
<td>2007</td>
<td>6.5</td>
<td>2.3</td>
</tr>
<tr>
<td>2008</td>
<td>7.0</td>
<td>1.8</td>
</tr>
<tr>
<td>2009</td>
<td>5.5</td>
<td>2.1</td>
</tr>
<tr>
<td>2010</td>
<td>6.7</td>
<td>-0.9</td>
</tr>
<tr>
<td>2011</td>
<td>6.5</td>
<td>4.9</td>
</tr>
<tr>
<td>2012</td>
<td>6.9</td>
<td>5.3</td>
</tr>
<tr>
<td>2013</td>
<td>7.2</td>
<td>5.8</td>
</tr>
<tr>
<td>2014e</td>
<td>~7.5</td>
<td>~6.0</td>
</tr>
</tbody>
</table>

1) Aggregated data for 14 European, North American and Asian OEMs (incl. results from financial services business)

Source: IHS; Factset; company information; Roland Berger/Lazard
Financial performance of suppliers varies greatly depending on region, company size, product focus and business model

Profitability trends in the global automotive supplier industry – 2014e vs. 2007

<table>
<thead>
<tr>
<th>Region</th>
<th>Company size</th>
<th>Product focus</th>
<th>Business model</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAFTA suppliers significantly improved their performance since the auto crisis to almost 8% EBIT</td>
<td>Suppliers with &gt;EUR 10 bn revenues maintained their strong profitability level of above 7% EBIT</td>
<td>Tire-focused suppliers maintained their strong margins</td>
<td>&quot;Product innovators&quot; had stable above-average margins of ~8%, further positive trend in 2014</td>
</tr>
<tr>
<td>Performance of Europe-based suppliers partly impacted by weak home market in 2013 (but positive trend in 2014)</td>
<td>Lower midsized suppliers (EUR 0.5 to 2.5 bn revenues) remained above average</td>
<td>Also powertrain suppliers remained above average</td>
<td></td>
</tr>
<tr>
<td>Chinese suppliers still very strong, but with gradually decreasing margin levels</td>
<td>Upper midsized suppliers (EUR 2.5 to 10 bn revenues) remained below average</td>
<td>Interior-focused suppliers saw margins decline and had the lowest profitability level overall of around 5%</td>
<td></td>
</tr>
<tr>
<td>Japanese suppliers on average remain at a weaker profitability level</td>
<td>Small suppliers (below EUR 0.5 bn revenues had the lowest profitability (~5%))</td>
<td>Margin of &quot;process specialists&quot; stayed stable, below average since 2007</td>
<td></td>
</tr>
</tbody>
</table>

Source: Company information; Roland Berger/Lazard
NAFTA-based suppliers are currently more profitable than their European peers – China-based suppliers recently on the decline

Key supplier performance indicators by region, 2013/2014 [%]

<table>
<thead>
<tr>
<th>Region</th>
<th>EBIT margin 2013</th>
<th>Revenue CAGR 2007-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>7.7</td>
<td>11.7%</td>
</tr>
<tr>
<td>NAFTA</td>
<td>7.0</td>
<td>1.9%</td>
</tr>
<tr>
<td>Europe</td>
<td>6.6</td>
<td>4.5%</td>
</tr>
<tr>
<td>Japan</td>
<td>6.5</td>
<td>0.4%</td>
</tr>
<tr>
<td>Korea</td>
<td>6.5</td>
<td>14.6%</td>
</tr>
</tbody>
</table>

> **Europe**-based suppliers in principle benefit from **leading technology** positions in many segments and **favorable customer mix** – some large suppliers with weaker performance in 2013 vs. 2012 (and 2014) impacted the regional average

> **NAFTA**-based suppliers still benefit from **substantial restructuring** of their business during the 2008/2009 auto crisis

> **China**-based suppliers are still leading edge, but margin levels are gradually decreasing due to **intensified competition**

> **Japan-based** suppliers trapped by dependency on their **home market** and respective OEMs

Source: Company information; Roland Berger/Lazard
Very small and midsize suppliers lag behind in terms of EBIT margin – Large globally operating suppliers are top of the class

Key supplier performance indicators by company size (sales in EUR bn), 2013/2014 [%]

- **Revenue CAGR 2007-13**: 3.8%, 5.2%, 3.9%, 3.0%, 4.8%, 3.2%
- **EBIT margin trend 2014**: 5.4%, 7.6%, 7.6%, 6.4%, 6.6%, 7.9%
- **Avg. = 7.2**

> **Leveraging scale** on the cost side clearly paid off in recent years

> **Large multinational suppliers** continued to benefit from the ongoing globalization

> **Midsize suppliers** (EUR 2.5-10 bn revenues) "stuck in the middle" – performance remaining below average

> Many **very small suppliers** suffered from the growing cost of going global in recent years

Source: Company information; Roland Berger/Lazard
Powertrain and tire-focused suppliers currently achieve the highest profitability – Interior suppliers remain significantly below average

Key supplier performance indicators by product focus, 2013/2014 [%]

<table>
<thead>
<tr>
<th>Product Focus</th>
<th>2013 EBIT Margin</th>
<th>2014 EBIT Margin</th>
<th>CAGR 2007-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires</td>
<td>7.6</td>
<td>9.4</td>
<td>2.7%</td>
</tr>
<tr>
<td>Powertrain</td>
<td>7.0</td>
<td>7.6</td>
<td>6.5%</td>
</tr>
<tr>
<td>Exterior</td>
<td>7.2</td>
<td>7.2</td>
<td>1.7%</td>
</tr>
<tr>
<td>Chassis</td>
<td>5.6</td>
<td>5.5</td>
<td>3.0%</td>
</tr>
<tr>
<td>Interior</td>
<td>5.5</td>
<td>5.5</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

> **Powertrain** margins reduced by intensified competition in this growing business – still on a high level

> **Exterior** suppliers improved in recent years, partly due to growing lightweight focus

> **Chassis** suppliers developed around the industry average for quite some time – future development increasingly driven by **active safety**

> **Tire** suppliers clearly benefited from their strong **aftermarket** business in recent years

> **Interior** suppliers continue to struggle with high **commoditization pressure**

**Source:** Company information; Roland Berger/Lazard
Product innovators clearly outpace process specialists in terms of profitability

Key supplier performance indicators by business model, 2013/2014 [%]

<table>
<thead>
<tr>
<th></th>
<th>Product innovators¹</th>
<th>Process specialists²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAGR 2007-13</td>
<td>4.3%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>EBIT margin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trend 2014</td>
<td>8.1</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>EBIT margin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

> Innovative products feature **higher differentiation potential** and greater OEM willingness to pay

> High **entry barriers** through **intellectual property** in many innovation-driven segments

> **Competitive structure** more consolidated in innovation-driven segments

> **Higher fragmentation** in many process-driven segments drives price competition

¹ Business model based on innovative products with differentiation potential  
² Business model based on process expertise (while product differentiation potential is limited)

Source: Company information; Roland Berger/Lazard
Looking at the individual company level, revenue growth does not necessarily correlate with profitability.

No clear correlation between revenue growth and profitability (R² of only ~0.13).

One group of top-performing suppliers, though, has managed to grow its business faster than the overall industry while earning above-average margins – product (or process) differentiation as the main driver.

Source: Company information; Roland Berger/Lazard
One group of top-performing supplier has managed to grow its business at high margins – Growing gap in recent years

Key performance indicators of top vs. low performing suppliers¹)

<table>
<thead>
<tr>
<th>Revenue growth [2005=100]</th>
<th>EBIT²) margin [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>100</td>
</tr>
<tr>
<td>2006</td>
<td>115</td>
</tr>
<tr>
<td>2007</td>
<td>132</td>
</tr>
<tr>
<td>2008</td>
<td>152</td>
</tr>
<tr>
<td>2009</td>
<td>175</td>
</tr>
<tr>
<td>2010</td>
<td>210</td>
</tr>
<tr>
<td>2011</td>
<td>225</td>
</tr>
<tr>
<td>2012</td>
<td>242</td>
</tr>
<tr>
<td>2013</td>
<td>~260</td>
</tr>
<tr>
<td>2014e</td>
<td>~115</td>
</tr>
<tr>
<td>2005</td>
<td>100</td>
</tr>
<tr>
<td>2006</td>
<td>110</td>
</tr>
<tr>
<td>2007</td>
<td>116</td>
</tr>
<tr>
<td>2008</td>
<td>107</td>
</tr>
<tr>
<td>2009</td>
<td>97</td>
</tr>
<tr>
<td>2010</td>
<td>102</td>
</tr>
<tr>
<td>2011</td>
<td>103</td>
</tr>
<tr>
<td>2012</td>
<td>112</td>
</tr>
<tr>
<td>2013</td>
<td>~115</td>
</tr>
<tr>
<td>2014e</td>
<td>~13</td>
</tr>
</tbody>
</table>

¹) Top (low) performance based on above- (below-) average revenue growth 2007-2013, ROCE 2007-2013 and ROCE 2013
²) EBIT after restructuring items

Source: Company information; Roland Berger/Lazard
Five key success factors have been applied by most of these players

Top 5 key success factors of top performers

1. Strong efforts to maintain/increase USP and **technological differentiation**

2. Focus on product segments with above-average **growth rates and margin potential**

3. Anti-cyclical **efficiency improvement** efforts (overheads, plant locations, …)

4. Strong increase of **production and engineering footprint** outside Triad markets

5. Good **organization** of processes and structures in globalized setups

Source: Roland Berger/Lazard
Looking back, there is little reason for automotive suppliers to be dissatisfied with the past five years

Historic performance and current status

> The global automotive supplier industry enjoyed a **five-year period of record growth and profitability** – a situation barely expected at the end of 2009

> At the same time, automotive suppliers have **outperformed their OEM customers** in terms of profitability – compared to other industries there is still room for improvement, though

> Despite the fact that the **overall market growth has slowed** since 2012, suppliers on average **maintained or even further improved their margins**, based on better utilized capacities, higher leverage of fixed costs and a favorable product mix development

> Along with operational performance, many suppliers have substantially **improved their liquidity and financing situation** and find themselves in a **more stable position** than in 2007

> On the flip side, this positive development came with **significantly higher complexity of the business** for automotive suppliers – global reach, product proliferation, diverging technology roadmaps, quality risks, etc.
B. The short-term challenge – Uncertainty rises as record profitability is expected to come to an end
Short term, we expect slower growth with profit margins still remaining at a high level – Downside risks outweighing opportunities

Supplier global revenue and margin outlook, 2015/2016

**Revenue growth** [2005=100]

<table>
<thead>
<tr>
<th>Year</th>
<th>05</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14e</th>
<th>15e</th>
<th>16e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>100</td>
<td>109</td>
<td>119</td>
<td>116</td>
<td>99</td>
<td>118</td>
<td>132</td>
<td>137</td>
<td>148</td>
<td>~155</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EBIT\(^1\) margin [%]**

<table>
<thead>
<tr>
<th>Year</th>
<th>05</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14e</th>
<th>15e</th>
<th>16e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>6.0</td>
<td>5.7</td>
<td>6.5</td>
<td>2.1</td>
<td>1.8</td>
<td>7.0</td>
<td>6.5</td>
<td>6.9</td>
<td>7.2</td>
<td>~7.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Company information; Roland Berger/Lazard
Uncertainty about the market development in 2015 stays at the top of the supplier CEO agenda

Supplier CEO radar screen for 2015 and beyond

Note: Excluding product segment specific technology and operational issues

Source: Roland Berger/Lazard
Global light vehicle production is expected to continue its growth over the next two years – But at a much slower pace than before

Light vehicles production volume by region, 2011-2016 [m units]

Annual growth by region [CAGR, %]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>&lt;0</td>
<td>0 to +2</td>
</tr>
<tr>
<td>NAFTA</td>
<td>+9</td>
<td>+2</td>
</tr>
<tr>
<td>Japan</td>
<td>+6</td>
<td>-7 to -8</td>
</tr>
<tr>
<td>China</td>
<td>+10</td>
<td>+6 to +8</td>
</tr>
<tr>
<td>Brazil</td>
<td>-2&lt;sup&gt;1)&lt;/sup&gt; to &lt;0</td>
<td>0 to +7</td>
</tr>
<tr>
<td>India</td>
<td>0</td>
<td>+4 to &gt;10</td>
</tr>
<tr>
<td>Russia</td>
<td>-2&lt;sup&gt;1)&lt;/sup&gt; to 0</td>
<td>0 to +2&lt;sup&gt;2)&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note: Total bar size reflecting IHS volume forecast

1) Conservative estimate assumes lower actual level in 2014 compared to IHS forecast 2014 (but still assuming stable macroeconomic environment)
2) Assuming a still stable political environment

Source: IHS; Roland Berger/Lazard
Commercial vehicles production is expected to grow slightly again until 2016 – Conservative estimate has volumes flat

Medium/heavy duty vehicles\(^1\) production volume by region, 2011-2016 [m units]

<table>
<thead>
<tr>
<th>Region</th>
<th>2011</th>
<th>2014e</th>
<th>2016e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>3.3</td>
<td>3.3</td>
<td>3.6</td>
</tr>
<tr>
<td>NAFTA</td>
<td>3.1</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Japan</td>
<td>3.2</td>
<td>0.4</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Annual growth by region [CAGR, %]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>-4</td>
<td>2 to +6</td>
</tr>
<tr>
<td>NAFTA</td>
<td>+6</td>
<td>~4</td>
</tr>
<tr>
<td>Japan</td>
<td>+8</td>
<td>~0</td>
</tr>
<tr>
<td>China</td>
<td>-2</td>
<td>-3 to -5</td>
</tr>
<tr>
<td>Brazil</td>
<td>-7 to -12</td>
<td>+4 to +8</td>
</tr>
<tr>
<td>India</td>
<td>-16(^2) to -7</td>
<td>~0 to &gt;15</td>
</tr>
<tr>
<td>Russia</td>
<td>-6(^3) to -3</td>
<td>~0 to &gt;10(^3)</td>
</tr>
</tbody>
</table>

1) Excluding buses   2) Conservative estimate assumes lower actual level in 2014 compared to IHS forecast 2014 (but still assuming stable macroeconomic environment)   3) Assuming a still stable political environment

Note: Total bar size reflecting IHS volume forecast
Source: IHS; Roland Berger/Lazard
OEMs are facing higher margin pressure – Impact of pricing and warranty cost increasing

Key drivers of increasing OEM margin pressure

> Growing difficulties to maintain end customer price levels – especially in Europe and China

> Increasing cost of product proliferation and shortening replacement cycles

> Rising warranty cost driven by a growing number of high-volume recalls

> Increasing complexity and variety of new automotive technologies

“The automotive industry faces **fierce competition** and high **pressure on earnings**!”

Martin Winterkorn, Volkswagen Group, October 2

“Germany is probably one of the **toughest markets** currently.” Overall, the European market “is not really **encouraging** at the moment.”

Dieter Zetsche, Daimler, October 2

*Price levels in Europe are "still not where BMW expected them to be"*. "This is really tough competition with the corresponding consequences for prices."

Norbert Reithofer, BMW, October 2

“The **discount battle** remains tough.”

Karl Schlicht, Toyota Europe, October 2

Source: Press; Roland Berger/Lazard
Particularly European OEMs have kicked off additional cost reduction efforts, creating friction in their supplier relations

Recent OEM cost reduction efforts and impact on supplier relations

Recent OEM cost reduction efforts

<table>
<thead>
<tr>
<th>OEM</th>
<th>Scope and impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>VW</td>
<td>&gt; Reduce cost by ~EUR 7 bn, of which 5 bn in Volkswagen brand until 2018 &lt;br&gt; &gt; 1/3 by fixed cost reduction, 1/4 by sales and ~1/4 by R&amp;D, and others &lt;br&gt; &gt; Fewer models and additional product offers</td>
</tr>
<tr>
<td>BMW</td>
<td>&gt; Reduce costs by several hundred million euros annually until 2020 &lt;br&gt; &gt; Reduce R&amp;D budgets, flexibilize production &lt;br&gt; &gt; Particular focus on Mini and 1 series</td>
</tr>
<tr>
<td>Daimler</td>
<td>&gt; Realign global production to reduce operating costs by 5-6% annually (in addition to already existing cost saving programs) &lt;br&gt; &gt; Increased standardization, job shifts, reduced vertical integration and investment</td>
</tr>
<tr>
<td>PSA</td>
<td>&gt; &quot;Back in the race&quot; turnaround plan, targeting lower production cost by EUR 1,100 per vehicle by 2018 – additional measures already announced &lt;br&gt; &gt; Comprehensive set of measures, including reduced number of models, upgraded auto plants, boosted market share in growing markets, reduced jobs and lowered labor costs</td>
</tr>
<tr>
<td>Renault-Nissan</td>
<td>&gt; Raised the goal for combined alliance savings by 7.5 percent, accelerating cooperation efforts (save &quot;at least&quot; USD 5.8 bn by 2016) &lt;br&gt; &gt; Stepped up joint projects in development, manufacturing, purchasing and human resources</td>
</tr>
</tbody>
</table>

Source: Company information; press; IHS Global Study on OEM-Supplier relations October 2014; Roland Berger/Lazard
C. The long-term challenge – An industry structure fundamentally changing
The strategic long-term challenge: Both opportunities and risks for auto suppliers have never been so high

Summary of opportunities and risks from changing industry structure

> The automotive supplier industry is facing a **period of constant change** – Customer demand, OEMs production and sourcing strategies, technological (r)evolution, enforced legislation, new competitors all contribute to that change

> Most of those developments are **not fundamentally new** – But the **magnitude** with which they are going to impact automotive suppliers at the same time over the coming years is **unprecedented**

> Those changes come with a **higher degree of uncertainty** – Technological roadmaps are far from being clear for certain components/systems, and long-trusted relationships with OEM customers might end up being sacrificed in the battle for new global program awards

> For automotive suppliers, this environment yields an **ever higher number of both opportunities and risks** – Those players that focus on the **winning product, customer and regional mix** (and are prepared to undertake the required upfront efforts) **can hugely benefit** from overall volume growth, a higher value add and incremental margin potentials from innovative technologies

> By contrast, even a **single wrong decision** can have a **deteriorating impact** – Those suppliers that are unable to keep pace (due to strategic, managerial or financial reasons) **will be left behind**

Source: Roland Berger/Lazard
Automotive suppliers need to manage a broad variety of long-term challenges

Supplier CEO radar screen for 2015 and beyond

Note: Excluding product segment specific technology and operational issues

Source: Roland Berger/Lazard
End customer demand will likely drive up market volumes primarily in Asia – But price levels might come under even greater pressure

Car buyers – Future developments

> **Continued shift** of end customer demand **toward Asia** – **China to remain the most important market** both in terms of total market size and absolute market growth for the next decade

> **Moderate relevance of next generation markets** (beyond BRIC) in terms of customer demand – Higher potential as best-cost production locations

> **Further growing price sensitivity** of end customer across all markets and most of the segments – Rising total cost of vehicle ownership and ever broader alternatives for consumer spend

> **Significantly rising customer requirements** for entry level segment vehicles **in China** (at current pricing level though) – Challenging local OEMs on quality and technology, and Western OEMs on cost competitiveness

> In the long term, **gradual substitution of vehicle ownership** by a multi-model transportation mix – Primarily relevant for metropolitan/urban population in Western markets in the first instance

1) Harvey ball indicating “confidence level” on the hypotheses; empty = low, full = high
OEM demand is expected to undergo a structural change in terms of regions, value add and contract volumes

OEMs – Future developments

> **Continued regional shift** of OEM activities to the growing sales markets – With production already localized to a large extent, **engineering is to follow**

> **New production regions** beyond BRIC rising in importance with individual OEMs likely to go for different countries – **No clear hub emerging** that suppliers could focus on and leverage across their customer base

> **Single contract volumes further on the rise** as OEMs foster platform and modular toolkit strategies to manage their cost structures at an even higher product proliferation than today – Smaller supplier panels, but higher relevance of dual sourcing strategies

> Higher willingness of the OEMs to accept a **lower degree of physical co-localization** – In return for cost-competitive global delivery (e.g. from few centralized best-cost country hubs)

> **Reduction** of OEM share of **manufacturing value add** by another ~5% points – But fierce competition over the (engineering and manufacturing) lead on new powertrain technologies

*1) Harvey ball indicating “confidence level” on the hypotheses; empty = low, full = high*
The consolidation of the supplier industry will likely continue – With emerging market investors being at the forefront

Competition – Future developments

> Need for short-term improvement of technological capabilities and customer/market access as main drivers of M&A activities – Shorter development cycles and time to market favoring acquisitions over organic growth

> Emerging market suppliers/investors with high relevance for global supplier M&A – Stronger need for action (improving competitiveness in both their home markets and elsewhere) meets strong financial resources

> Overall ongoing consolidation driving down the total number of suppliers globally

> Slow economics-driven consolidation of fragmented process-driven segments (if at all) – Difficult business case for potential buyers due to weak margin situation and often diverging interests of individual OEMs

> Emergence of 2-3 competitive Tier-1 suppliers from China among the global top 30 suppliers long term – Local Chinese supply base gradually closes the gap in global relevance based on China's importance as #1 car production location

> Entry of further non-automotive players into the automotive supply industry due to shifts in vehicle technology – Mainly within connectivity and powertrain electrification segments

1) Harvey ball indicating “confidence level” on the hypotheses; empty = low, full = high

Source: Roland Berger/Lazard
Suppliers will likely face changing competitive dynamics even within their supply base

Supply base – Future developments

> **Skilled labor** becoming an increasingly **scarce resource** – Both in triad (driven by an aging population leaving employment) and emerging markets (driven by both higher production volume and greater high-tech content)

> **Rising energy cost** in the mid to long term – Especially for electricity

> Continued **volatility of raw material prices** with certain materials being temporarily short in supply – Driven by growing global demand (not only from the automotive industry) and financial trading

> Further growing **bargaining power** from few large-scale **raw material suppliers**

> **Materials providers expanding their business downstream** into automotive components manufacturing – Steel makers, chemicals companies

> Higher **economical/financial stress** within the (small-size) **sub-supplier base** – Cost reduction requirements of Tier-1 suppliers collides with limited ability of small Tier-2/3 suppliers to raise productivity from scale economies

1) Harvey ball indicating "confidence level" on the hypotheses; empty = low, full = high

Source: Roland Berger/Lazard
The ongoing technology shift is expected to generate new revenue and profit opportunities – But requires heavy upfront investments

Technology/legislation – Future developments

> **Full-scale vehicle connectivity** with consumer devices emerging as a must-have feature in the near future – Innovation potential for the human machine interface, but also risk for established automotive suppliers to lose revenue and margin potential to non-automotive competitors

> **Advanced driver assistance systems** further grows in importance as main innovation area in the vehicle (alongside powertrain electrification and lightweight construction) – New (software) applications/solutions largely based on existing hardware

> In the long term, **fully autonomous driving capability** emerges on the horizon – Still various technological and legal obstacles to overcome

> Ongoing **electrification of the powertrain** – Focus on combustion engine optimization (in conjunction with further hybridization) through 2020, breakthrough of **fully electric vehicles thereafter** (driven by even tighter CO₂ emissions regulations)

> Rising **cost pressure on less-innovative** (process-driven) segments – Resources to be freed up to fund innovations

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1) Harvey ball indicating “confidence level” on the hypotheses; empty = low, full = high

Source: Roland Berger/Lazard
Volatile capital/currency markets pose challenges – Opportunities to benefit from low interest rates and premium valuation levels

Capital markets/financing – Future developments

> Globally acting OEM customers will lead to more **global financing structures** at suppliers in order to **eliminate exchange rate fluctuations** and **tap new pools of capital outside existing home markets and financing instruments**

> Strong and profitable growth of recent years led to a **re-rating of automotive supplier valuations** and a surge in M&A activity that may be affected by current uncertainties short term but is expected to be sustainable mid term if the market environment does not worsen significantly

> Continuation of **low interest rates short to mid term**, especially in areas with uncertain economic outlooks and low inflation, results in a **good environment for refinancing of existing debt**

> **Elevated volatility in equity capital markets** due to uncertain economic outlook **short term**, but continuation of **good preconditions for equity capital market placements mid term**

> **Increasing focus on dual-track (M&A and IPO) exit processes** in order to seek value maximization of temporary owners of automotive assets (e.g. private equity investors)

---

1) Harvey ball indicating “confidence level” on the hypotheses; empty = low, full = high

Source: Roland Berger/Lazard
The global vehicle component market is expected to grow further – But structural industry changes will redistribute revenue pools

Major development drivers of the automotive component market\(^1\) [EUR bn]

<table>
<thead>
<tr>
<th>MAIN DRIVERS</th>
<th>1 Car buyers</th>
<th>5 Technology/legislation</th>
<th>2 OEMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEMAND VOLUME(^2)</td>
<td>(\sum = \sim 110)</td>
<td>(\sum = \sim 95)</td>
<td>(\sim 791)</td>
</tr>
<tr>
<td>PRODUCT MIX(^3)</td>
<td>147</td>
<td>-53</td>
<td>-80</td>
</tr>
<tr>
<td>PRICE(^4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Light vehicle OE market, excluding commercial vehicle and aftermarket portion
\(^2\) Change driven by vehicle production volume (volume per car at 2014 level)
\(^3\) Additional growth caused by change in product/technology content per car (excl. price-downs); Winning/losing components: Expected growth above/below pure volume growth
\(^4\) Sum of net annual price-downs, including price-ups for new functionalities and innovations

Source: Roland Berger/Lazard
Strongest growth in the component market expected in DAS and xEV – Europe/NAFTA below average, Japan even declining

Component market value by domain and region [EUR bn]

### By domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>2014</th>
<th>2020e</th>
<th>CAGR 2014-'20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infotainment/Connectivity</td>
<td>667</td>
<td>19</td>
<td>3.2%</td>
</tr>
<tr>
<td>Interior</td>
<td>151</td>
<td>178</td>
<td>2.8%</td>
</tr>
<tr>
<td>DAS¹)</td>
<td>97</td>
<td>110</td>
<td>2.1%</td>
</tr>
<tr>
<td>Chassis</td>
<td>167</td>
<td>196</td>
<td>2.7%</td>
</tr>
<tr>
<td>Exterior</td>
<td>216</td>
<td>248</td>
<td>14.3%</td>
</tr>
<tr>
<td>xEV</td>
<td>9</td>
<td>20</td>
<td>2.4%</td>
</tr>
<tr>
<td>Powertrain</td>
<td>205</td>
<td>182</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Domain</th>
<th>Total CAGR: 2.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>By region</td>
<td></td>
</tr>
</tbody>
</table>

### By region

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>2020e</th>
<th>CAGR 2014-'20</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoW</td>
<td>667</td>
<td>54</td>
<td>5.1%</td>
</tr>
<tr>
<td>BRI</td>
<td>182</td>
<td>76</td>
<td>6.9%</td>
</tr>
<tr>
<td>China</td>
<td>54</td>
<td>205</td>
<td>5.7%</td>
</tr>
<tr>
<td>Japan/Korea</td>
<td>110</td>
<td>96</td>
<td>-2.2%</td>
</tr>
<tr>
<td>NAFTA</td>
<td>157</td>
<td>177</td>
<td>2.0%</td>
</tr>
<tr>
<td>Europe</td>
<td>161</td>
<td>182</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

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¹) Driver Assistance System components, excluding software

Note: Component market growth does not account for changes in the OEM outsourcing share or individual M&A activities

Source: Strategy Analytics; Roland Berger/Lazard
D. The conclusion – Key actions for automotive suppliers
Suppliers need to ride the next wave of efficiency gains, while getting prepared to benefit from the industry shift

Key actions for automotive suppliers

**Short term**

1. Drive smart **efficiency improvements** (indirect production, overheads,...)

2. Increase/maintain **flexibility** across the entire value chain (production, R&D, purchasing,...)

3. Keep **key resources** motivated and "available" for potential task forces

4. Closely manage **investment decisions** and **one-time costs**

5. Cautiously **monitor market** developments and **signals** for a possible **downturn**

**Long term**

1. Maintain/sharpen unique selling proposition with clear **technological** or **process differentiation**

2. Focus on product segments with **above-average growth rates** and **margin potential** – actively leverage **M&A opportunities**

3. Balance **regional** and **customer share** – from a revenue but also value creation perspective (production, R&D, sourcing,...)

4. Establish **best-in-class processes** and **structures** to remain efficient and flexible in more complex globalized setups

5. Apply scenario techniques and **regularly review/adapt defined strategy**

Source: Roland Berger/Lazard
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