The North American Supplier Industry: Restructure, Refinance, Restore

Federal Reserve Bank of Chicago
Fifteenth Annual Automotive Outlook Symposium
June 6, 2008

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Original Equipment Suppliers Association
1301 W. Long Lake Road, Suite 225
Troy, MI 48098-6328

www.oesa.org
A Strong and Diverse Membership: The OESA Network

- 386 members
- 301 regular members
- $300 billion global sales

OESA Board of Directors

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- Jan Kowal, President and Member of the Board, Brose North America, Inc.
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- Jim McClyea, Chairman and CEO, Cooper Standard Automotive
- Bob McKenna, President and CEO, MEMA
- George Perry, President and CEO, Yazaki North America, Inc.
- Al J. Power, President and COO, Van-Rob Inc.
- Jerry Scott, Chairman, GHSP
- Dr. Mohsen Sohi, President and CEO, Freudenberg-NOK
- Wallace K. Tsuha, Jr., Chairman, CEO and President, Saturn Electronics & Engineering, Inc.
- Don Whitsitt, President, AISIN World Corp. of America
OESA Membership: A Broad Range of Resources

- **14 peer group councils**: CEO, CFO, Chief Purchasing Officers, China Strategy, Communications, Environmental, Health & Safety, Foreign Subsidiaries, HR, Legal Issues, Sales & Marketing, Product Development, Small and Medium Suppliers, Warranty, Government Affairs
- **OEM Town Hall Meetings**: GM, Ford, Chrysler, Toyota
- **Member Surveys**: Benchmarking, Organizational Issues, Material Markets, Commercial Issues, Financial Practices
- **Member Industry Studies**: Terms & Conditions, Intellectual Property, Supply Chain, Customer Diversification, Warranty Management, Global Manufacturing Footprint...
- **Automotive Industry Events & Seminars**: addressing the timely and relevant challenges and issues suppliers face
- **International Collaboration**: CLEPA-Europe, JAMA and JAPIA-JAPAN, OESA/MEMA-US
- **The Network**: OESA provides a forum, a source of industry information, and a vast network of suppliers, customers, and affiliates
Outline

- Business Environment
- Restructure
- Refinance
- Restore
Outline

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- Restructure
- Refinance
- Restore
Current Industry Headwinds
Economics overpower industry’s ability to price for volume

• Consumer confidence: “tanking”
• Housing: 50-60% through down cycle
• Sub-prime fall out: risk aversion increases

• 2007 US sales = 16.1 million
• 2008 forecasts = 14.9 to 15.8 million

• 2007 NA production = 14.9 million
• 2008 forecasts = 14.0 to 14.5 million

Sources: Wall Street Journal, Federal Reserve Board, CSM Worldwide
All Signs Point to a Pessimistic 2008 Outlook
Suppliers on the winning side of consolidation are optimistic

Describe the general twelve month outlook for your business. Over the past two months, has your opinion become:

Responses = 114

Source: May 2008 OESA Supplier Barometer
Suppliers are Focused on Three Major Risk Factors for Meeting 2008 NA Business Plans

- Declining production volume levels and volatility
- Rising raw material and energy prices
- Risk of an economic recession

Additional significant risks:
- Continued Detroit Three-specific market share declines
- Weakening U.S. dollar

Source: March 2008 OESA Supplier Barometer; Responses = 89
Petroleum Prices
Will they kill off economic growth?

The last forecast from the US DOE; but too optimistic?
Gasoline Prices
Will they kill off the lucrative truck market?

The last forecast from the US DOE; but too optimistic?

Short-Term Energy Outlook, May 2008
CAFE Will Radically Change the US Market
Fuel price is already driving real change

The great uncertainty:
How will manufacturers need to alter vehicle mix and technology to meet 35/2020?

Note: 1987 to 2007 actual mix shares; 2008 to 2020 illustrative trend – not a forecast
Steel Material Prices
Will they reduce long term margin improvements?

US steel sheet prices fob Midwest mill, nominal, US$/s.ton

Data: CRU Analysis, presentation to OESA CPO Council, April 2008

10 Years
Why are Material Markets Important to Suppliers?

Identify the percentage of direct raw materials and purchased components in your cost structure.

Source: OESA Material Cost Recovery Survey, May 2008; N = 76
Material Costs Creating Financial Vulnerability

Without any material cost recovery, do current material costs put your company at risk of financial insolvency?

**Total Sample**

- Yes: 22%
- No: 78%

**Companies under $250 million Revenue**

- Yes: 24%
- No: 77%

N = 77
N = 41

Outline

- Business Environment
- Restructure
- Refinance
- Restore
8 of the top 18 NA Suppliers are Restructuring in and out of Chapter 11

Top 150 suppliers – The largest suppliers to North America, ranked by sales of original equipment parts in 2007

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Address</th>
<th>Top executives</th>
<th>2007 North American CRM (sales in millions)</th>
<th>2006 North American CRM (sales in millions)</th>
<th>Total world CRM (sales in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Magna International Inc.</td>
<td>537 Magna Dr. Aurora, Ontario L4G 7K1 Canada</td>
<td>Donald Walker &amp; Stephen West co-CEOs</td>
<td>$13,290</td>
<td>$12,897</td>
<td>$26,185</td>
</tr>
<tr>
<td>2</td>
<td>Delphi Corp.</td>
<td>5725 Delphi Drive Troy, MI 48098</td>
<td>Robert Miller executive chairman</td>
<td>$11,810</td>
<td>$13,070</td>
<td>$24,880</td>
</tr>
<tr>
<td>3</td>
<td>Johnson Controls Inc.</td>
<td>49200 Valley Drive Plymouth, MI 49541</td>
<td>Boba Butzenius president, automotive experience</td>
<td>$7,460</td>
<td>$5,580</td>
<td>$13,040</td>
</tr>
<tr>
<td>4</td>
<td>Lear Corp.</td>
<td>1001 Lear Place Southfield, MI 48075</td>
<td>Bob Rowland chairman, president &amp; CEO</td>
<td>$7,190</td>
<td>$9,610</td>
<td>$16,800</td>
</tr>
<tr>
<td>5</td>
<td>Robert Bosch LLC</td>
<td>30000 Hills Tech Dr. Farmington Hills, MI 48331</td>
<td>Peter Mark chairman, president &amp; CEO</td>
<td>$6,480</td>
<td>$4,453</td>
<td>$10,933</td>
</tr>
<tr>
<td>6</td>
<td>Denso International America Inc.</td>
<td>24777 Denso Dr. Troy, MI 48098</td>
<td>Hayna Monda chairman, president &amp; CEO</td>
<td>$5,860</td>
<td>$6,455</td>
<td>$12,315</td>
</tr>
<tr>
<td>7</td>
<td>Continental AG</td>
<td>2000 20th St. Auburn Hills, MI 48006</td>
<td>William Kuppa president &amp; CEO Continental North America</td>
<td>$5,250</td>
<td>$2,480</td>
<td>$7,730</td>
</tr>
<tr>
<td>8</td>
<td>Dana Corp.</td>
<td>4500 Dorr St. Toledo, OH 43615</td>
<td>Gary News CEO</td>
<td>$4,797</td>
<td>$5,187</td>
<td>$9,984</td>
</tr>
<tr>
<td>9</td>
<td>TRW Automotive Inc.</td>
<td>12865 Tech Center Drive Livonia, MI 48150</td>
<td>John Plunk president &amp; CEO</td>
<td>$4,607</td>
<td>$4,135</td>
<td>$8,742</td>
</tr>
<tr>
<td>10</td>
<td>Thetres-Kapa USA Inc.</td>
<td>3155 W. Big Beaver Road Southfield, MI 48075</td>
<td>Christian Kost sel president &amp; government affairs</td>
<td>$3,876</td>
<td>$3,579</td>
<td>$7,455</td>
</tr>
<tr>
<td>11</td>
<td>Aisin World Corp. of America</td>
<td>4050 Commerce Center Drive Plymouth, MI 48170</td>
<td>Don Whitehead president</td>
<td>$3,755</td>
<td>$3,486</td>
<td>$7,241</td>
</tr>
<tr>
<td>12</td>
<td>Visteon Corp.</td>
<td>9200 Van Fleet Township, MI 48111</td>
<td>Michael Johnson president</td>
<td>$3,431</td>
<td>$4,068</td>
<td>$7,500</td>
</tr>
<tr>
<td>13</td>
<td>International Automotive Components</td>
<td>5300 Atlas Club Drive Dearborn, MI 48126</td>
<td>Jim Kunslof president &amp; CEO North America Asia</td>
<td>$3,290</td>
<td>$2,499</td>
<td>$5,789</td>
</tr>
<tr>
<td>14</td>
<td>American Axle &amp; Manufacturing</td>
<td>5300 Atlas Club Drive Dearborn, MI 48126</td>
<td>Richard Cass president &amp; CEO</td>
<td>$3,848</td>
<td>$3,392</td>
<td>$7,240</td>
</tr>
<tr>
<td>15</td>
<td>Aisin Warner Inc.</td>
<td>6491 W. Fort St. Detroit, MI 48209</td>
<td>Chip McLaren CEO</td>
<td>$3,800</td>
<td>$4,858</td>
<td>$8,658</td>
</tr>
<tr>
<td>16</td>
<td>Yokohama Rubber Co. Ltd.</td>
<td>25055 Auburn Road Auburn Hills, MI 48326</td>
<td>George Perry president &amp; CEO</td>
<td>$2,783</td>
<td>$3,704</td>
<td>$6,487</td>
</tr>
<tr>
<td>17</td>
<td>Fortech Inc.</td>
<td>2700 W. 40th St. Detroit, MI 48209</td>
<td>Michael Heflin president North America</td>
<td>$2,610</td>
<td>$1,550</td>
<td>$4,160</td>
</tr>
<tr>
<td>18</td>
<td>Navistar International Engines Group</td>
<td>10400 W. North Ave., Melrose Park, IL 60160</td>
<td>Jack Allen president</td>
<td>$2,545</td>
<td>$2,218</td>
<td>$4,763</td>
</tr>
</tbody>
</table>

To update this list, see Information to the Automotive News Data Center.
Cash Flows Choke when the Business Pipeline is Weak, Cost Structures Balloon, Balance Sheets are Leveraged and Legacies Constrain Options

<table>
<thead>
<tr>
<th>Business Portfolio</th>
<th>Amcast (12/04 and 11/05) ASC (5/07) Plastech (2/08) Collins &amp; Aikman (5/05)</th>
<th>Dana (3/06) Federal-Mogul (12/01)</th>
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</thead>
<tbody>
<tr>
<td>Product Cost Structure</td>
<td>Blackhawk (10/07) Blue Water (2/08) Dura (10/06) Pine River Plastics (2/07) Tower (2/05)</td>
<td>Delphi (10/05) Remy Int. (10/07)</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>Legacy Burdens</td>
<td></td>
</tr>
</tbody>
</table>

Note: OESA selected bankruptcy examples; not all cases are clearly identified with just two root causes. IRN has identified 36 major bankruptcies since 2003.
American Axle Strike: Ripples Throughout Industry
73% of respondents impacted; 91% expect less than 10% recovery

If affected, to this point how much has the strike impacted your top-line revenue?

- Greater than 20%: 5%
- 11 to 20%: 12%
- 6 to 10%: 25%
- 1 to 5%: 58%

Source: OESA Supplier Barometer, May 2008; Responses = 83
Supplier Financial Strength Migrated Higher in 2007 – Yet 18% Remain “Stressed”

*Source: BBK 2007 Financial Ratings Survey; suppliers rated C or below are potentially stressed*
Considering your top five customers (by revenue) and top five suppliers (by purchases), do you currently, or do you anticipate in 2008 that you will, have a major customer or supplier in Chapter 11 restructuring?

**Customers**
- Yes: 21%
- No: 79%

**Suppliers**
- Yes: 34%
- No: 66%

Source: OESA Supplier Barometer, May 2008, Responses = 113
Outline

- Business Environment
- Restructure
- Refinance
- Restore
Carve-Outs & Spin-Outs

Diverse and Robust Business Portfolio
LVS 2007 Value-Added Sales

Geographic Mix
- North America 30%
- Asia Pacific 26%
- Europe 13%
- South America 15%
- Brazil 4%

Segment Mix
- Chassis Systems 49%
- Body Systems 40%

Customer Mix

<table>
<thead>
<tr>
<th></th>
<th>Ford</th>
<th>GM</th>
<th>Chrysler</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>4.1%</td>
<td>2.5%</td>
<td>12.6%</td>
<td>19.5%</td>
</tr>
<tr>
<td>South America</td>
<td>0.0%</td>
<td>2.0%</td>
<td>0.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Europe</td>
<td>2.7%</td>
<td>1.5%</td>
<td>0.0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>0.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Only 20% of sales are to the Detroit 3 in North America

(1) Value-added sales was defined to be total sales less pass-through sales. In 2007, LVS had value-added sales of $2.6 billion and pass-through sales of $100 million.
Asset Combinations - Hedge Funds

<table>
<thead>
<tr>
<th>Company</th>
<th>Sales (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 International Automotive Components</td>
<td>$1,595</td>
</tr>
<tr>
<td>Group North America LLC</td>
<td></td>
</tr>
<tr>
<td>2 Plastech Engineered Products Inc.</td>
<td>$1,350</td>
</tr>
<tr>
<td>3 Berry Plastics Corp.</td>
<td>$1,315</td>
</tr>
<tr>
<td>4 Delphi Corp.</td>
<td>$1,030</td>
</tr>
<tr>
<td>5 Magna International Inc.</td>
<td>$945</td>
</tr>
<tr>
<td>6 Newell Rubbermaid Inc.</td>
<td>$719</td>
</tr>
<tr>
<td>7 Nypro Inc.</td>
<td>$699.9</td>
</tr>
<tr>
<td>8 Automotive Components Holdings LLC</td>
<td>$517</td>
</tr>
<tr>
<td>9 Illinois Tool Works Inc.</td>
<td>$500</td>
</tr>
<tr>
<td>10 AptarGroup Inc.</td>
<td>$472</td>
</tr>
</tbody>
</table>

This 25-page section focusing on the injection molding industry begins on Page 13.
Plastics News and Industry estimates
Delphi close to selling suspension and brake system operations; Chinese millionaire Tianbao Zhou expected to win auction, sources say

Delphi, the bankrupt US automotive supplier, is getting very close to selling its suspension and brake system operations, said two sources familiar with the situation. Chinese entrepreneur Tianbao Zhou is rumored to be the front-runner to acquire the business for USD 200m, said one of those sources. "We are in discussions regarding the sale of those assets," said a Delphi spokesperson, who declined comment on Zhou or the identity of any other bidders. Tianbao Zhou is expected to emerge victoriously with a bid of USD 200m after years of preparation and several rounds of auction, the source said. Zhou was ranked 391 on Forbes' Richest Chinese of 2007 list with personal assets worth CNY 1.55bn (USD 222m).
Credit Markets are Tightening for Automotive

Credit Markets are Tightening for Automotive

Global M&A Deal Volume

Source: Capital IQ, "primary," automobiles & components companies only

Deals are Becoming More Selective

U.S. Quarterly Institutional Term Loan Issuance

Source: Loan Pricing Corp (LPC)

Deals are Becoming More Selective

Private Equity and Hedge Funds
The New American Supplier: Speed, Cash, Delivery

- Private Equity
  - American Industrial Partners
  - Blue Point Capital
  - Castle Harlin
  - First Atlantic
  - Hammond Kennedy Whitney
  - KPS Special Situations
  - One Equity Partners
  - Platinum Equity
  - Ripplewood Holdings
  - Sawmill Capital
  - Thayer Capital
  - Wilber Ross (IAC)
  - Wynnchurch Capital

- Hedge Funds
  - Angelo, Gordon
  - Appaloosa Management
  - Cerberus Capital Management
  - D.E. Shaw
  - Harbinger Capital
  - Marathon Asset Management
  - Pardus Capital Management
  - Patriarch Partners
  - Silver Point Capital
  - Stanfield Capital Partners
  - Tennenbaum Capital Partners

Source: Macquarie Group, OESA CFO Council meeting presentation, 2007
AlixPartners' analysis: ROCE has a 68 percent correlation to capacity utilization.

The traditional 80 percent rule of thumb does not apply given the shift of fixed costs and responsibilities.

Range of likely consolidation varies widely from stampings and molding on the high side to powertrain/driveline suppliers on the low end.

Financial consolidators will have a significant impact driving consolidation versus the strategic consolidators of the late 1990s.

Remember, the world is flat and capacity analysis must be from a global perspective.

Source: U.S. Federal Reserve Board of Governors.
Outline

- Business Environment
- Refinance
- Restructure
- Restore
Suppliers are Focused on Three Major Risk Factors in 5 to 7 Year NA Business Plans

- Managing an increasingly complex global footprint – across engineering, purchasing, manufacturing and sales functions
- Detroit Three long-term competitiveness
- Emerging international competitors and capacity

Additional significant risks:
- Continued weakness of the US dollar
- Material price volatility and levels

Source: March 2008 OESA Supplier Barometer; Responses = 82
There is Significant Growth in Global Markets

Global Unit Growth = 2.5% CAGR

Global Revenue Growth = 5% CAGR

Supplier value-added expected to grow from 2/3 of the vehicle towards 3/4 over the next 10 years.
One Certainty: Globalization
NA unit volumes increase; while world share declines

2007 volume = 68.55 million units; 2014 volume = 87.34 million units

Source: CSM Worldwide
As Such, Global Trade Flows will Increase
Emerging markets and manufacturing footprints drive trade

2007 US Parts Trade with the World

$33 Billion
U.S.-Canada

$28 Billion

$20 Billion

$1 Billion
U.S.-China

$14 Billion
U.S.-Mexico

$9 Billion

2007 - US Parts Exports Increase 5.3%; Imports Increase 3.7%

Source: U.S. International Trade Administration
Regional Supply Bases Will Remain Relevant

- **Operational**
  - Synchronization with JIT production and delivery systems
  - Global coordination across design and product development teams
  - Accurate landed cost data for analysis
  - Insufficient focus on supplier development

- **Organizational**
  - Coordination among internal OEMs functions requires local presence
  - Critical purchasing, engineering resources not available within LCC

- **Cultural**
  - Overcoming resistance to change supplier relationships (real and perceived issues)
  - Overcoming previous unsuccessful sourcing decisions (surveys show actual cost savings can run just 20 percent of anticipated savings)

Source: McKinsey & Company
Supplier Fortunes will not Turn until Major Customer Fortunes Turn

- It is perfectly rational with flat or declining real revenues that a company look to its largest cost component for relief
- In addition, raw material increases heavily influenced unfavorable cost positions at GM and Ford
- Short-term gains are the average 3 – 5% annual price reductions given by suppliers
- Two fundamental questions
  - Are cost (not price) structures truly changing in the industry?
  - Can the industry move to a new working model with a shared understanding of the attributes that characterize true collaboration?

Note: constant $ = 2005 dollars corrected by CPI.
Operating Relationships Will Not Improve Until Customer TCP Improves

- While the total global unit and revenue growth remains strong; supplier fortunes reflect customer and platform exposure with individual customers.
- McKinsey TCP measures total labor and capital productivity derived from a market, supply chain management, labor input, labor market and capital input perspective that includes:
  - Value added/labor cost, value add/employee, labor cost/employee, value add/vehicle, number of vehicles per employee, revenues/vehicle, intermediate input/vehicle, invested capital/vehicle.
- OEM performance plays out in supplier relations, ability to price, production schedule predictability – basically every element that makes up the opportunity and cost of doing business.
- GM has shown improvement, while Ford slipped between 2005 and 2006 on this measure.

OEM – Supplier Working Relationships Show Some Progress, but Lag other Improvements

Source: Planning Perspective, 2007 Survey
350 to 500 is good to very good; 250 to 349 indicates adequate relations; under 249 poor
Suppliers’ Cannot Wait for Their Customers: Suppliers need to address what is in their control

- **Lean operations from floor to back shop**
  - Implementing Overall Equipment Efficiency and value-mapping to all manufacturing and business processes

- **Total value chain management focused on cost out not price down**
  - Assuring productivity growth outruns margin pressure and capacity utilization fluctuation

- **Active working capital management**
  - Instilling a financial versus an accounting mindset

- **Strategic margin management**
  - Managing portfolio towards lower cost to serve customers and higher margin products

- **Next stage of competitiveness: a TPS-mindset throughout all supply tiers**
North American Light Duty Production Forecast

1985
13.7 million Total
12.8 million Detroit Three
0.87 million Transplant

1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008E
2009E

15.02 million units – 2007
14.14 million units - 2008
9.41 million units – 2007
8.55 million units - 2008
5.61 million units – 2007
5.59 million units - 2008

Source: KeyBanc Capital Markets, April 2008
Suppliers are Looking to Diversify Automotive Customers and Non-Automotive Business

Responses = 84

Note: Because these are the median responses within each category, the sum across all categories does not add to 100%.
There is Good News In the Air
The Largest Customer’s Product is Getting Better

<table>
<thead>
<tr>
<th>Product and Brand Building Focus Reflected in Reason to Purchase</th>
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<tbody>
<tr>
<td><strong>2004 MY</strong></td>
</tr>
<tr>
<td>#1</td>
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<td>#3</td>
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<tr>
<td>#4</td>
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<tr>
<td>#5</td>
</tr>
</tbody>
</table>

Source: GM Global Market and Industry Analysis
Supplier Business Opportunities: In Some Ways It’s Back to the Future

Bailey Roadster

Chevy Volt: E-Flex FC

Figure 43. Thomas Edison poses alongside the Bailey roadster that survived a 1,000-mile run. (U.S. Department of the Interior, National Park Service, Edison National Historic Site, 14.625/12, acc. 214)
The Electrification of the Vehicle
The supply base will be core to all new systems

- **Energy Resource**
  - Oil (Conventional)
  - Oil (Non-Conventional)
  - Biomass
  - Coal
  - Natural Gas
  - Renewables (Solar, Wind, Hydro)
  - Nuclear

- **Conversion**
  - Syngas CO, H₂
  - Heat

- **Energy Carrier**
  - Liquid Fuels

- **Propulsion System**
  - Conventional ICE: Gasoline / Diesel
  - ICE Hybrid
  - Plug-In Hybrid ICE
  - Electric Vehicle
  - Fuel-Cell Electric

- **Critical Dependency on Battery Technology**

Source: Royal Dutch Shell
Reaching 35 MPG in 2020 Touches Every System

<table>
<thead>
<tr>
<th>Exhibit 9</th>
<th>Innovation roadmap for North America – compact class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segments</td>
<td></td>
</tr>
<tr>
<td>Interior</td>
<td>* Smart airbags</td>
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<td></td>
<td>* LED tail lights</td>
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<td></td>
<td>* Pre-crash sensors</td>
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<tr>
<td></td>
<td>* Adaptive cruise control</td>
</tr>
<tr>
<td></td>
<td>* Flat ribbon cable</td>
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<td></td>
<td>* Smart distribution</td>
</tr>
<tr>
<td>Power train</td>
<td>* Electronic bus systems</td>
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<td>Electronics in all segments</td>
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<td></td>
<td>* Shift by wire</td>
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<td></td>
<td>* Electrical double clutch</td>
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<td>Chassis</td>
<td>* Gasoline direct injection</td>
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<td>* Tire pressure monitoring</td>
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<td>* Adhesives technology</td>
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<td></td>
<td>* Plastic add-on parts</td>
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<tr>
<td></td>
<td>* Composite materials</td>
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<td></td>
<td>* Laser welding</td>
</tr>
<tr>
<td></td>
<td>* Color matching</td>
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<tr>
<td></td>
<td>* Colors with Lotus effect</td>
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<table>
<thead>
<tr>
<th>Technology changes the value chain architecture</th>
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<td>* LED Head lights</td>
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<tr>
<td>* CO2 air conditioning</td>
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<tr>
<td>* External network</td>
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<td>* Night vision</td>
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<td>* Object recognition</td>
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<td>* Optical bus systems</td>
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Technologies:
- Electro-Mech. Valvetrains
- Fuel Cell Auxiliary Power
- Cylinder Deactivation
- Electrification Of HVAC
- Electro-Hyd. Brakes
- Electro-Mech. Brakes, Steering
- Sandwich Structures

Note: Indicates when technologies will be predominate in the compact market

Source: McKinsey/PTW-HAWK Survey
Conclusions

- Short-term, North American production environment and supplier financial condition is weakening

- Long-term NA production volume outlook remains positive; global opportunities remain significant

- While emerging markets must draw OEM and supplier attention, this should not come at the expense of the developed markets

- Regional markets and supply bases will exist within the context of the industry’s global engineering, manufacturing and sales footprint

- The automobile will be at the epicenter of demographic changes, public policy challenges and product and process innovations – the suppliers and OEMs will have tremendous opportunities. But we need to improve the return on capital to have the wherewithal to succeed.
Thank You

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