The U.S. Automobile Industry Outlook

FTA Conference
Charleston, West Virginia
October 17, 2011

Kim Hill
Group Director
Associate Director, Research
Center for Automotive Research
Sales in U.S.
(where are they?)
It’s All About Product
U.S. Light Vehicle Sales
Percent Change
YTD Through September: 2011 vs. 2010

<table>
<thead>
<tr>
<th>Category</th>
<th>Sales</th>
<th>Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>9,659,752</td>
<td>+715,511</td>
<td>10.4%</td>
</tr>
<tr>
<td>Light Trucks</td>
<td>4,671,194</td>
<td>+611,804</td>
<td>15.1% (49.1%)</td>
</tr>
<tr>
<td>Passenger Cars</td>
<td>4,847,751</td>
<td>+285,720</td>
<td>6.3% (50.9%)</td>
</tr>
</tbody>
</table>

Source: Automotive News
Percent Change in Sales of Light Vehicles Per OEM:
YTD Through September: 2011 vs. 2010

- Ford = Ford, Lincoln, & Mercury divisions only

Source: Automotive News
SAAR Up Last Month
U.S. Light Vehicle Sales Monthly SAAR:
September 2010 Through September 2011

Source: Automotive News Data Center
But Not Sales . . .

U.S. Light Vehicle Sales by Month:
September 2010 Through September 2011

Source: Automotive News Data Center
(Sales of Detroit 3 N. American “owned” production)

Source: CAR Research
N.A. Light Vehicle Production Percent Change
YTD Through September 2011 vs. 2010

Source: Automotive News

Updated 10/7/2011
Automotive Manufacturing Labor Compensation, Employment, and Compensation Growth by Country, 2010

**CANADA**
- Wage: $44.24
- Wage Growth*: 83.9%

**UNITED KINGDOM**
- Wage: $30.19
- Wage Growth*: 39.5%

**GERMANY**
- Wage: $52.60
- Employment: 829,000 (2008)
- Wage Growth*: 63.5%

**JAPAN**
- Wage: $32.31
- Employment: 866,000 (2008)
- Wage Growth*: 35.9%

**UNITED STATES**
- Wage: $34.59
- Employment: 674,000 (2010)
- Wage Growth*: 6.9%

**POLAND**
- Wage: $7.65
- Wage Growth*: 95.2%

**MEXICO**
- Wage: $3.94
- Employment: 486,669 (2009)
- Wage Growth*: 67.5%

**FRANCE**
- Wage: $33.03
- Wage Growth*: 95.2%

**ITALY**
- Wage: $29.41
- Employment: 163,800 (2009)
- Wage Growth*: 69.9%

**KOREA**
- Wage: $18.72
- Wage Growth*: 55.7%

**UNITED STATES**
- Wage: $34.59
- Employment: 674,000 (2010)
- Wage Growth*: 6.9%

**CHINA**
- Wage: $3.45
- Employment: 2,745,303 (2008)
- Wage Growth*: 221.3%

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*Wage growth defined as % change between 2002 and 2010

Source: CAR Research, BLS, and Wards
Detroit Three Manufacturing Plants

Total U.S. Detroit Three Employment (12.31.09): 177,417

Legend
- Black: Chrysler
- Orange: Delphi
- Blue: Ford
- Red: General Motors
- Gold: Other

- Windsor Engine
- Windsor Transmission (GM)
- Windsor Assembly
- Brawntop Assembly
- Ingersoll Assembly (GM)
- Oakville Assembly (Ford)
- Brampton Assembly
- Oshawa Assembly 1 & 2 (GM)
- Oshawa Metal Center (GM)
- Cambridge Engine (Toyota)
- Buffalo
- St. Thomas and Rochester
- Trenton Engine
- Ohio Assembly (Avon Lordstown) Assembly and Metal Engines
- Cleveland Engine Casting
- Twinsburg Stamping and Components & Metal
- Baltimore Transmission
- Walton Hills Stamping
- Toledo Supplier Park & Machining
- Defiance GMPT Foundry
- Lima Engine
- Moraine Engine Plant 2
- Sharpsville Transmission
- Indianapolis Metal Center
- Bedford Foundry
- Louisville Assembly
- Kentucky Truck Assembly
- Bowling Green Assembly
- Spring Hill Engine
- Spring Hill Assembly & Stamping
- Kokomo Engine & Castings/Kokomo Delphi GM
- Indiana Transmission Plant 1 & 2
- Fort Wayne Assembly
- Arlington Assembly
- Wentzville Assembly & Stamping
- Kansas City Assembly 1 & 2
- Chicago Stamping and Assembly
- Marion Metal Center
- Belvidere Assembly
- North Assembly Kenosha Engine
- Toledo Transmission
- Twin Cities Assembly
- Windsor Assembly
- Windsor Engine
- Windsor Transmission (GM)
International Automotive Manufacturing Plants

Total U.S. International OEMs Employment: (12.31.08) 107,488
Automotive Suppliers

Source: ELM 2009
Vehicle Assembly is Huge Driver of Economy

- Typical Assembly Plant: 2,000 Jobs
- 0.56 Powertrain Plants or 450 Jobs
- 0.56 Stamping Plants or 650 Jobs
- 2,900 Parts & Component Jobs or a Total of 6,000 Manufacturing Jobs!

And another 6,800 Non-manufacturing jobs
For a total of 12,800 jobs
Estimated Total Employment Impacts

The 1.7 million direct jobs* in the automotive industry’s total U.S. automotive operations:

- support 8 million total private sector jobs,
- contributing more than $500 billion in annual compensation,
- and nearly $70 billion in personal tax revenues.

*These jobs include new vehicle development and production, parts manufacturing, and the sales and service of new vehicles.
Parts Suppliers Are Top Employer in 7 States,
Top 5 employer in 12 Other States

(Ranked by Size Compared to Other Industries in State)
Automaker Investments: 2010-2011

$18.1 Billion in the USA

Source: CAR Research, Book of Deals
Automotive Industry Total Employment

Total Automotive Employment by State

- Yellow: Less than 20,000
- Orange: 20,000 to 70,000
- Dark Orange: 70,000 to 150,000
- Bright Orange: 150,000 to 300,000
- Red: More than 300,000

Note: Includes direct and estimated intermediate jobs
Automotive Industry Employment as a Percentage of State Labor Force

Total Automotive Employment as a Percentage of State Labor Force

- Less than 1%
- 1 to 2%
- 2 to 4%
- 4 to 8%
- More than 8%

Note: Includes direct and estimated intermediate jobs

Source: Quarterly Census of Employment and Wages, BLS 2008
Where are we going?

(well, it depends how you feel...)
Only 1.8% Growth in 1st Half 2011
Need 3% GDP Growth To Have a Positive Sales Growth

GDP Growth Rate and Sales Growth Rate, 1950-1H 2011

Source: BEA
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<tbody>
<tr>
<td>GDP</td>
<td>0.5</td>
<td>3.6</td>
<td>3.0</td>
<td>1.7</td>
<td>1.3</td>
<td>1.7</td>
<td>3.8</td>
<td>3.9</td>
<td>3.8</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, CAR estimates
Need Unemployment Rate Below 6% to Have Growth?

Light Vehicle Sales and Unemployment Rate, 1978-1H 2011

Source: BEA, BLS
U.S. Unemployment Rate and Forecast
Q1 2007-Q4 2011

Source: BLS; CAR estimates
U.S. Housing Price: M/M % Changes
Q4 1994 – Q2 2011

Source: Federal Housing Finance Agency; S&P/Case Shiller Home Price Indices
DOW JONES INDEX*

- Dec '99 – Sep '02: -34%
- Oct '07 – Feb '08: -49%
- Feb '09 – Nov '10: +46%
- Apr '11 – Oct. '11: -17%

*Logarithmic Index
Current Value is 59.4!
U of M Consumer Sentiment Index
1978-2010

Source: Thomson Reuters
The Only Good News
Changes from Jan ’07:
CPI-New Vehicle and CPI-Used Vehicle

New Vehicle ('97 = 100)
Used Vehicle ('82-'84 = 100)
Small Car Segment Market Share & Real Regular Gasoline Price: 1980-2010

Source: Ward’s Automotive, Energy Information Administration
Gasoline Prices
(Nominal)

Source: Energy Information Administration, USDOE, 6/8/09

*Regular Conventional Gasoline
All Price Nominal
# 2011 U.S. Sales Forecasts

(Units in Millions)

<table>
<thead>
<tr>
<th>Source</th>
<th>Forecast</th>
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<tbody>
<tr>
<td>CAR</td>
<td>12.6 (9/11)</td>
</tr>
<tr>
<td>J.D. Power</td>
<td>12.6 (9/11)</td>
</tr>
<tr>
<td>Edmunds.com</td>
<td>12.5 (9/11)</td>
</tr>
<tr>
<td>IHS</td>
<td>12.6 (9/11)</td>
</tr>
<tr>
<td>Global Insight</td>
<td>12.8 (9/11)</td>
</tr>
<tr>
<td>Citigroup</td>
<td>12.5 (12.5-13.0)</td>
</tr>
<tr>
<td>Ford</td>
<td>13.0 (13.0-13.5)</td>
</tr>
<tr>
<td>GM</td>
<td>12.7 (12.5-12.9)</td>
</tr>
<tr>
<td>Toyota</td>
<td>12.4</td>
</tr>
<tr>
<td>Honda</td>
<td></td>
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</tbody>
</table>
U.S. Light Vehicle CAR Sales Forecast

Source: CAR Research, IHS Global Insight
Where is the Pent-Up Demand?
U.S. Light Vehicle Age and Scrappage Rate

Source: R.L. Polk
CAR’s Long Run Forecast

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<tr>
<td>Sept</td>
<td>12.6</td>
<td>13.8</td>
<td>14.1</td>
<td>14.8</td>
<td>15.2</td>
<td>15.5</td>
<td>15.6</td>
<td>15.7</td>
<td>15.7</td>
<td>15.6</td>
</tr>
</tbody>
</table>
Production Will Rise
U.S. Vehicle Production &
Automotive Manufacturing Employment Forecasts

<table>
<thead>
<tr>
<th>Year</th>
<th>Vehicle Production</th>
<th>Auto Manuf. Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7,592,725</td>
<td>566,400</td>
</tr>
<tr>
<td>2011</td>
<td>8,285,711</td>
<td>580,000</td>
</tr>
<tr>
<td>2012</td>
<td>9,319,907</td>
<td>650,000</td>
</tr>
<tr>
<td>2013</td>
<td>10,026,321</td>
<td>697,000</td>
</tr>
<tr>
<td>2014</td>
<td>10,517,018</td>
<td>731,600</td>
</tr>
<tr>
<td>2015</td>
<td>10,783,777</td>
<td>750,000</td>
</tr>
</tbody>
</table>

Source: IHS Global Insight; BLS; CAR Research, September 2011

+70K +50K +35K +20K
Motor Vehicle & Parts Manufacturing Employment 2000 – 2011*

*2011 through August

Source: BLS, U.S. DOL
# New UAW Contracts and Jobs

<table>
<thead>
<tr>
<th></th>
<th>Chrysler</th>
<th>Ford</th>
<th>GM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signing bonus</strong></td>
<td>$3,750 (paid in two installments)</td>
<td>$6,000 ($5,000 for &lt;1 year seniority)</td>
<td>$5,000</td>
</tr>
<tr>
<td><strong>Wages</strong></td>
<td>Entry level $15.78-19.28, four year progression; no change for first tier</td>
<td>Entry level $14.78-19.28, four year progression; no change for first tier</td>
<td></td>
</tr>
<tr>
<td><strong>Jobs</strong></td>
<td>Promises 2,100 new entry-level jobs; 10,000 retained</td>
<td>Promises 5,750 new entry-level jobs; 6,250 previously announced job creation/retention</td>
<td>Promises 6,400 new entry-level jobs; 11,800 previously announced job creation/retention</td>
</tr>
<tr>
<td><strong>Buyouts</strong></td>
<td>None</td>
<td>$100,000 for skilled trades and $50,000 for production workers who retire by 3/31/12</td>
<td>$75,000 for skilled trades who retire by 3/31/12; $10,000 for any workers who leave by 2013</td>
</tr>
<tr>
<td><strong>Profit-sharing</strong></td>
<td>$1 for every $1 million profit based on 85% of worldwide profit; capped at $12,000 per year</td>
<td>$1 for every $1 million in North American profit (Avg. $3,752 payout in November based on Q1-2 2011); capped at $12,000 per year</td>
<td>$1 for every $1 million in North American profit; capped at $12,000 per year</td>
</tr>
<tr>
<td><strong>Retirees</strong></td>
<td>No change to pensions and no bonuses; health care trust may get 10% of workers' profit-sharing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COLA</strong></td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other bonuses</strong></td>
<td>Four annual payments of $500; between $500-1,000 annual quality bonus; $300 one-time attendance bonus for perfect attendance</td>
<td>Four annual payments of $1,500 for inflation protection; and four annual payments up to $250 per year for competitiveness bonus</td>
<td>Three annual payments of $1,000 for inflation protection (2012-2014); and four annual payments up to $250 per year quality bonus</td>
</tr>
<tr>
<td><strong>Health care</strong></td>
<td>No change to worker contribution; $20 co-pay for unlimited office visits</td>
<td>No change to worker contribution; $20 co-pay for unlimited office visits</td>
<td>No change to worker contribution; $25 co-pay for unlimited office visits</td>
</tr>
</tbody>
</table>

*Source: UAW-Chrysler, UAW-Ford, and UAW-GM White Books*
## Jobs and Impacts

### 4-YEAR CONTRACT TOTALS

<table>
<thead>
<tr>
<th></th>
<th>Minimum Cash Payouts</th>
<th>Jobs Created/Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrysler</td>
<td>$7,750</td>
<td>2,100/10,000</td>
</tr>
<tr>
<td>Ford</td>
<td>$16,752*</td>
<td>5,750/6,250</td>
</tr>
<tr>
<td>GM</td>
<td>$12,500*</td>
<td>6,400/11,800</td>
</tr>
</tbody>
</table>

*Includes minimum 2011 profit sharing payout
Source: UAW-Chrysler, UAW-Ford, and UAW-GM White Books

### IMPACTS

- **Jobs Created:** 14,250
  - Impact: 114,000 jobs

- **Jobs retained:** 28,050
  - Impact: 224,400 jobs
Marking Time in Auto—a Lot of ‘Ifs’

• U.S. economy may take several years to recover to produce a real auto sales recovery
• Pent-up demand may actually be quite modest – sales will not reach 16 million until after 2020
• Detroit 3 should capture about half of the market
• U.S. consumers will not drastically increase purchase of small vehicles in the long run . . .
• Possibility of a new downturn – is at least 50%
• Gas prices as volatile as ever—what are the expectations?
• Auto sector is adding jobs—favorable contract negotiations guarantee some of them, unless...
• Auto producing states will see positive impacts
U.S. Auto Sales are Stagnating with the Economy

Good:
• Used Vehicle prices and age of fleet are high
• Credit is more available/interest rates low
• Dollar is low against Yen and against Euro

But . . .

Bad:
• Economy growing at “stall speed”
• Unemployment rate and length is terrible
• House prices are still falling and will fall more . . .
• Stock market is volatile
• States/Cities cutting spending and employment
• Consumer confidence at record low . . .
• Gas prices spiking with food prices
• Higher commodity prices = higher auto prices
• Japan crisis still cutting sales inventories and hurt sales – for Toyota/Honda
• Employers are hesitant to hire or invest . . . Until?
Thank You

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