Motor Vehicle Outlook
FTA Revenue Estimating Conference
Minneapolis, Minnesota
September 24, 2001

Mark Haas, Director
Office of Revenue and Tax Analysis
Department of Treasury
State of Michigan

U.S Auto Industry
Put in Perspective

• U.S. Auto Related Employment - 6.6 million (4.9% of Total)
• U.S. Auto Related Compensation - $243 billion (5.6% of total)
• Auto purchases more volatile than business cycle
U. S. Automotive Outlook

• Ability to Buy
• Willingness to Buy
• Sales Trend
• Sales Outlook
• Production Outlook

Factors Affecting Auto Sales
Ability to Buy

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable Income</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Vehicle Prices</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Interest Rates</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Affordability</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Debt</td>
<td>Yellow</td>
<td>Red</td>
</tr>
</tbody>
</table>
Real Disposable Income Growth

Source: U.S. Bureau of Economic Analysis

Import Car Prices Falling

Sources: AAMA & Automotive News, Market Data Book 2001
Low Interest Rates Help Sales

![Graph showing average vehicle finance rates from 1973 to 2001. The rates range from 0% to 20%. The highest rate is 17.78% in 1994. The lowest rate is 7.58% in 2001.]

Source: Comerica Bank

Best Affordability Since 1980

![Graph showing weeks of income from 1979 to 2001. The weeks range from 20 to 30. The lowest weeks of income is 22.9 in 1979. The highest weeks of income is 23.4 in 2000. The 2001 weeks of income is 23.3 for the first half of the year.]

Source: Comerica Bank Economics Department
Consumer Debt Payments
Installment, Mortgage & Auto Leases

Percent of Disposable Personal Income

Source: Michigan Department of Treasury

Factors Affecting Auto Sales
Willingness to Buy

<table>
<thead>
<tr>
<th>Factor</th>
<th>2000</th>
<th>2001</th>
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<tbody>
<tr>
<td>Consumer Attitudes</td>
<td>Green</td>
<td>Yellow</td>
</tr>
<tr>
<td>Unemployment Claims</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Age of Vehicle</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>Demographics &amp; Tastes</td>
<td>Green</td>
<td>Yellow</td>
</tr>
<tr>
<td>Oil Prices</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>Stock Market</td>
<td>Yellow</td>
<td>Red</td>
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</tbody>
</table>
Consumer Car Buying Attitudes

Source: University of Michigan, Survey Research Center, September 2001

Weekly Initial Unemployment Claims

Source: U.S. Department of Labor
Vehicle Age Declining

2000 Median for Cars  8.3 years
2000 Median for Trucks  6.9 years

Source: Automotive News, 2001 Market Data Book

Oil Prices Moderating

Source: Monthly Energy Review
Stock Market Stalls

Vehicle Sales Trend

Source: Michigan Department of Treasury
U.S. Vehicle Sales First 8 Months of 2001

- Total: -4.9%
- Imports: 48%
- Daimler Chrysler: -10.5%
- Ford: -11.2%
- GM: -6.8%

2000 Domestic Share of U.S. Light Vehicle Sales

<table>
<thead>
<tr>
<th></th>
<th>Domestic Produced</th>
<th>Nameplate Sales</th>
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<tbody>
<tr>
<td>Cars</td>
<td>77.2%</td>
<td>52.6%</td>
</tr>
<tr>
<td>Trucks</td>
<td>90.0%</td>
<td>78.5%</td>
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<tr>
<td>Total</td>
<td>83.5%</td>
<td>65.3%</td>
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</table>
Sales Turndown?

- Negative wealth effect
- Income and Job Uncertainty
- Lower replacement demand
  
  **but**
  
  - Record incentives for now . . .
    - $2,400/vehicle for Big 3
  
  - Falling interest rates . . . (but record debt)
### 2001 Forecast Accuracy

<table>
<thead>
<tr>
<th></th>
<th>Aug 2000 Forecast</th>
<th>Sept 2001</th>
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<tbody>
<tr>
<td>WEFA Group</td>
<td>15.9</td>
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<tr>
<td>Standard &amp; Poor’s DRI</td>
<td>16.6</td>
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<tr>
<td>Univ. of Michigan</td>
<td>16.1</td>
<td>16.4</td>
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<tr>
<td>Blue Chip</td>
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### Light Vehicle Forecasts

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
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<tbody>
<tr>
<td>DRI - WEFA</td>
<td>16.0</td>
<td>17.1</td>
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<tr>
<td>Univ. of Michigan</td>
<td>16.0</td>
<td>15.9</td>
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<tr>
<td>Blue Chip</td>
<td>16.1</td>
<td>N/A</td>
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U.S. Motor Vehicle Outlook
Car and Light Truck Sales Forecast

Source: University of Michigan, RSQE, August 2001

Motor Vehicle Production

- Capacity Utilization
- Worker Bonuses
- Recent Downsizing
2000 Production and Capacity
North America

Millions of Vehicles

<table>
<thead>
<tr>
<th></th>
<th>Production</th>
<th>Capacity</th>
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</thead>
<tbody>
<tr>
<td>Cars</td>
<td>8.372</td>
<td>8.725</td>
</tr>
<tr>
<td>Trucks</td>
<td>8.924</td>
<td>8.611</td>
</tr>
</tbody>
</table>

Source: Automotive News, 2001 Market Data Book

Big 3 Profit Sharing Checks

Average Per Autoworker

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>GM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$800</td>
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<tr>
<td>Ford</td>
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<td>$375</td>
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Source: Ward's Automotive Reports
The First 3 Months of 2001

- 4,500 auto layoff announcements
- 85,000 layoffs (Net 60,000?)
- Multiple claims/retirements

U. S. Motor Vehicle Outlook Summary

- Sales Suffering
- Jobs, Attitudes and Affordability Key to Sales
- Lower Sales and Price Incentives Reducing Profit
- Increased Competition from Foreign Nameplates
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