Light Vehicle Market Outlook: Affordability an Issue and an Opportunity

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Outlook Optimistic But Threats Rising

- Economy is strong and so is vehicle demand:
  - High confidence + low unemployment + credit availability = the perfect storm for robust auto sales.

- Vehicle affordability a growing concern:
  - Rising interest rates, gas prices, vehicle prices coupled with low wage growth, inflation = strong headwind.

- Trump Tariffs are major threat to vehicle sales:
  - Prices will rise for new and used products, and parts. Weaker economy will lower demand further.

- Vehicle demand to shift toward used as off-lease vehicles flood the market:
  - Affordability and product mix will capture new buyers. New car/entry segments under greatest threat.
Labor Markets Are Historically Strong

Initial Unemployment Claims

Unemployment Rate

Source: Department of Labor
Wage Growth Weak Without Upward Pressure

Source: Department of Labor, Bureau of Labor Statistics, 3m averages
Tighter Monetary Policy Expected

Interest Rate Forecasts (%)

- Federal Funds
- Prime Rate
- 10-Year Treasury
- 30 yr Mortgage
- 1-Year Treasury
- New Car Loan 4yr

Sources: Federal Reserve, Moody’s Forecast
Rising Headwinds To Slow New Market

Light Vehicle Sales Outlook (millions)

Source: Cox Automotive Forecast, October 2018
Sales Pace Strong But Dichotomy Increasing

Monthly Sales SAAR (millions)

Source: US Bureau of Economic Analysis
Share Of Market Less Than $30,000 Declining


Source: Cox Automotive/XBB
Rising Lease Payments Impacting Choices

Monthly Payment Differences (3m avg and Trend)

New Loan v Used Loan

New Loan v New Lease

New Lease v Used Loan

Source: Cox Automotive Estimates
Previous Leasing Creating Major Headwind

Off-Lease Maturities (annual volume, millions)

Source: Cox Automotive Estimates
Affordability Critical To Buyers Decision

Used Vehicle Buyer Average Household Income

Source: Cox Automotive Estimates, IHS registrations
### Buying Conditions Changing Since Record Year

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Vehicle Sales</td>
<td>17.5m</td>
<td>17.0m</td>
<td>-500K</td>
</tr>
<tr>
<td>Avg Transaction Price</td>
<td>$34,353</td>
<td>$35,762</td>
<td>$1,409</td>
</tr>
<tr>
<td>Avg 5 year Loan Rate%</td>
<td>4.1</td>
<td>4.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Federal Funds Rate%</td>
<td>0.4</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Income Growth</td>
<td>1.7%</td>
<td>2.8%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.3%</td>
<td>2.5%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Gasoline Price</td>
<td>$2.15</td>
<td>$2.76</td>
<td>$0.61</td>
</tr>
</tbody>
</table>

Source: Cox Automotive
Gasoline Prices Impact Consumer Finances

Source: Department of Energy
Still Significant Savings From Better MPG

Driving 15K Miles Annually - Monthly Savings From 1 MPG Improvement

<table>
<thead>
<tr>
<th>Gasoline Price</th>
<th>20mpg to 21</th>
<th>25mpg to 26</th>
<th>30mpg to 31</th>
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</thead>
<tbody>
<tr>
<td>$2.50</td>
<td>$6.00</td>
<td>$4.50</td>
<td>$3.50</td>
</tr>
<tr>
<td>$3.00</td>
<td>$8.00</td>
<td>$6.00</td>
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<tr>
<td>$3.50</td>
<td>$10.00</td>
<td>$7.50</td>
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<tr>
<td>$4.00</td>
<td>$12.00</td>
<td>$9.00</td>
<td>$7.50</td>
</tr>
</tbody>
</table>

Source: Cox Automotive
MPG Importance Falling - Until The Next Oil Spike

Percent Respondents Stating Fuel Economy Very Important For Their Buying Decision

Correlation with Quarterly Gas Prices = .70

Source: Cox Automotive – KBB Research