Agenda

Time Check: 75 Minutes

**Intro & Cox Automotive**
Mark Schirmer, Director, Public Relations

**The Economy**
Jonathan Smoke, Chief Economist

**Market Performance: New Vehicles**
Blessin Cho, Director, Sales Analytics
Charlie Chesbrough, Senior Economist

**Market Performance: Used Vehicles**
Chris Frey, Senior Manager, Economic and Industry Insights

**2022 Outlook & Playlist**
Jonathan Smoke, Chief Economist and Resident DJ

**Q&A**
w/ Michelle Krebs, Executive Analyst
The Power of Cox Automotive

Harnessing the power of connected data for game-changing results
State of the Industry

Rough year for Consumer Sentiment: Omicron, war, and inflation

Morning Consult Index of Consumer Sentiment vs. Average Price of Unleaded

- MC ICS
- AAA Ave Unleaded $ (RH Axis)
The Economy

Changing macro conditions see more negative trends in near term

<table>
<thead>
<tr>
<th>Overall Economy</th>
<th>Real GDP Growth</th>
<th>+6.7% (Q3 ’21)</th>
<th>+7.0% (Q4 ’21)</th>
<th>+0.5% (Q1 ’22 F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Conditions</td>
<td>U3 Unemployment Rate</td>
<td>6.2% (Feb ’21)</td>
<td>4.0% (Jan ’22)</td>
<td>3.8% (Feb ’22)</td>
</tr>
<tr>
<td>Buyer Confidence</td>
<td>UofM Consumer Sentiment</td>
<td>84.9 (Mar ’21)</td>
<td>62.8 (Feb ’22)</td>
<td>59.7 (Mar ’22 P)</td>
</tr>
<tr>
<td>Wages</td>
<td>Earnings Growth</td>
<td>5.2% (Feb ’21)</td>
<td>5.1% (Feb ’22)</td>
<td></td>
</tr>
<tr>
<td>Buyer Ability</td>
<td>Disposable Income Y/Y</td>
<td>10.7% (Jan ’21)</td>
<td>0.1% (Jan ’22)</td>
<td></td>
</tr>
</tbody>
</table>
The Economy

Some consumer demand tailwinds become headwinds

<table>
<thead>
<tr>
<th>Auto Finance</th>
<th>FRBNY</th>
<th>$162 billion (Q4 ’20)</th>
<th>$181 billion (Q4 ’21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rates</td>
<td>Effective Fed Funds Rate</td>
<td>0.08% (Mar ’21)</td>
<td>0.33% (Mar ’22)</td>
</tr>
<tr>
<td>Borrowing Costs</td>
<td>Average New Auto Loan Rate</td>
<td>4.34% (Feb ’21)</td>
<td>4.39% (Feb ’22)</td>
</tr>
<tr>
<td>Mobility Costs</td>
<td>AAA Average Retail Unleaded Gasoline Price</td>
<td>$2.86 (Mar ’21)</td>
<td>$4.24 (Mar ’22)</td>
</tr>
</tbody>
</table>
How would you describe the current market for vehicles in the areas where you operate?

Note: Scale 1 - 100
What do you expect the market for vehicles in your area to look like 3 months from now?
Dealer Sentiment Index
FIRST QUARTER 2022

Inventory/Profits
How would you describe your profits over the past 3 months?
How would you describe the current new-vehicle inventory levels?

New Vehicle Inventory
Franchised Profits

Note: Scale 1 - 100

Dealer Sentiment Index Q1 2022
Market Performance: New Vehicles
Blessin Cho
Director, Sales Analytics
High Gas Prices Drive Shopping Behavior

Autotrader, Kelley Blue Book New-Vehicle Traffic

Source: KBB.com and Autotrader.com New Car Visits
Source: U.S. Energy Information Administration, U.S. Regular All Formulations Retail Gasoline Prices
Charlie Chesbrough
Senior Economist
New-Vehicle SAAR | Downtick expected in March – 2022 downgraded

Averaging 1.06 million sales since August – H2 supply expected to be better, need gains soon

Monthly Light Vehicle Sales SAAR (millions)

Sales (millions) | Passenger Car | Light Trucks | Total | Car Share
--- | --- | --- | --- | ---
CY2020 | 3.4 | 11.1 | 14.5 | 23.5%
CY2021 | 3.4 | 11.6 | 14.9 | 22.4%
Change | -1.5% | 4.8% | 3.3% | -1.1%
Q1 2021 | 0.9 | 3.0 | 3.9 | 22.4%
Q4 2021 | 0.7 | 2.6 | 3.3 | 19.9%
Q1 2022 | 0.7 | 2.6 | 3.3 | 20.6%

vs Q1 2021 | -22.7% | -14.4% | -16.3% | -1.7%
vs Q4 2021 | 3.3% | -1.1% | -0.2% | 0.7%
March 2021 | 0.4 | 1.2 | 1.6 | 22.7%
March 2022 | 0.3 | 1.0 | 1.2 | 20.8%
Change | -30.1% | -21.7% | -23.6% | -1.9%

2022 Sales Forecast: Q2 Update
- 16.0 million
- 15.3 million

Source: Cox Automotive, BEA
New-Vehicle Supply | Only minor improvement in 2022

Situation remains bad – 1.5 million fewer vehicles than 2021, and over 2.3 million lower than 2020

Source: Cox Automotive, vAuto VMA Data
American brands’ product complexity and large dealer networks may be harder to manage

Brand Inventory | Toyota has tight supplies – still wins Q1 sales

Source: Cox Automotive, vAuto VMA Data March 14, 2022
Europeans down in 2022 with EV OEMs (Tesla) gaining significant share; Rivian/Lucid launch

Asian Brands

American 3 Brands

European Brands

EV OEMs

Source: Cox Automotive estimates, Kelley Blue Book
## OEM Q1 Performance | Toyota is the champ; Tesla gains most share

GM down nearly 3% from 2020 – Hyundai gaining as Nissan and Honda slide

<table>
<thead>
<tr>
<th>Make</th>
<th>CY2020</th>
<th>CY2021</th>
<th>Change</th>
<th>Q1 2020</th>
<th>Q1 2021</th>
<th>Q1 2022</th>
<th>2022 vs 2020</th>
<th>2022 vs 2021</th>
<th>Share Q1 2020</th>
<th>Share Q1 2021</th>
<th>Share Q1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>2,112,940</td>
<td>2,332,263</td>
<td>10.4%</td>
<td>495,747</td>
<td>603,066</td>
<td>510,348</td>
<td>2.9%</td>
<td>-15.4%</td>
<td>14.1%</td>
<td>15.4%</td>
<td>15.6%</td>
</tr>
<tr>
<td>General Motors</td>
<td>2,535,283</td>
<td>2,202,577</td>
<td>-13.1%</td>
<td>616,432</td>
<td>639,406</td>
<td>485,330</td>
<td>-21.3%</td>
<td>-24.1%</td>
<td>17.6%</td>
<td>16.3%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Ford</td>
<td>2,034,708</td>
<td>1,891,753</td>
<td>-7.0%</td>
<td>514,614</td>
<td>517,711</td>
<td>431,123</td>
<td>-16.2%</td>
<td>-16.7%</td>
<td>14.7%</td>
<td>13.2%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Stellantis</td>
<td>1,820,636</td>
<td>1,777,393</td>
<td>-2.4%</td>
<td>446,768</td>
<td>469,651</td>
<td>411,174</td>
<td>-8.0%</td>
<td>-12.5%</td>
<td>12.7%</td>
<td>12.0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Hyundai</td>
<td>1,224,758</td>
<td>1,489,118</td>
<td>21.6%</td>
<td>272,775</td>
<td>334,902</td>
<td>317,100</td>
<td>16.2%</td>
<td>-5.3%</td>
<td>7.8%</td>
<td>8.5%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Honda</td>
<td>1,346,787</td>
<td>1,466,630</td>
<td>8.9%</td>
<td>298,784</td>
<td>347,091</td>
<td>252,205</td>
<td>-15.6%</td>
<td>-27.3%</td>
<td>8.5%</td>
<td>8.8%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Nissan-Mitsubishi</td>
<td>986,604</td>
<td>1,079,676</td>
<td>9.4%</td>
<td>293,169</td>
<td>313,784</td>
<td>216,199</td>
<td>-26.3%</td>
<td>-31.1%</td>
<td>8.4%</td>
<td>8.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Subaru</td>
<td>611,942</td>
<td>583,810</td>
<td>-4.6%</td>
<td>130,591</td>
<td>160,426</td>
<td>141,795</td>
<td>8.6%</td>
<td>-11.6%</td>
<td>3.7%</td>
<td>4.1%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Tesla</td>
<td>205,600</td>
<td>352,471</td>
<td>71.4%</td>
<td>56,200</td>
<td>69,300</td>
<td>132,052</td>
<td>135.0%</td>
<td>90.6%</td>
<td>1.6%</td>
<td>1.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>569,698</td>
<td>641,104</td>
<td>12.5%</td>
<td>128,436</td>
<td>163,069</td>
<td>116,319</td>
<td>-9.4%</td>
<td>-28.7%</td>
<td>3.7%</td>
<td>4.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>BMW</td>
<td>306,870</td>
<td>366,574</td>
<td>19.5%</td>
<td>64,692</td>
<td>77,718</td>
<td>79,685</td>
<td>23.2%</td>
<td>2.5%</td>
<td>1.8%</td>
<td>2.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Mazda</td>
<td>279,076</td>
<td>332,756</td>
<td>19.2%</td>
<td>67,670</td>
<td>83,258</td>
<td>78,436</td>
<td>15.9%</td>
<td>-5.8%</td>
<td>1.9%</td>
<td>2.1%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Daimler</td>
<td>325,915</td>
<td>329,574</td>
<td>1.1%</td>
<td>75,266</td>
<td>89,915</td>
<td>63,133</td>
<td>-16.1%</td>
<td>-29.8%</td>
<td>2.1%</td>
<td>2.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Geely</td>
<td>110,129</td>
<td>124,591</td>
<td>13.1%</td>
<td>19,485</td>
<td>27,357</td>
<td>23,298</td>
<td>19.6%</td>
<td>-14.8%</td>
<td>0.6%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Tata</td>
<td>97,418</td>
<td>92,380</td>
<td>-5.2%</td>
<td>25,429</td>
<td>27,950</td>
<td>18,699</td>
<td>-26.5%</td>
<td>-33.1%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.6%</td>
</tr>
<tr>
<td>NATION</td>
<td>14,568,364</td>
<td>15,063,831</td>
<td>3.4%</td>
<td>3,506,058</td>
<td>3,924,604</td>
<td>3,278,110</td>
<td>-6.5%</td>
<td>-16.5%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Cox Automotive, Kelley Blue Book
Transaction Prices | High growth rate likely to change soon

Price growth to slow as anniversary approaches, but more expensive mix of products will continue

Monthly Transaction Prices

Source: Cox Automotive, Kelley Blue Book
Seller’s Market | Strong margins continue into 2022

No hurry to return to “normal” – Revenue higher than 2019 with 2 million fewer vehicles sold

Incentive % of Transaction Price

<table>
<thead>
<tr>
<th></th>
<th>Price Share of MSRP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>12%</td>
<td></td>
</tr>
</tbody>
</table>

Monthly Transaction Revenue ($ billions)

- **Total Revenue (billions)**
  - CY2019: $647
  - CY2020: $580
  - CY2021: $650

Source: Cox Automotive, Kelley Blue Book

YTD 2022
Down <1% vs 2021
Up 7% vs 2019
Sales Channels | Massive change since COVID

Lease and fleet share has fallen sharply - presenting opportunities for OEMs

Retail Lease Share of All Retail Sales

Fleet Share of All Sales

Source: Cox Automotive analysis of IHS registrations
New-Vehicle Buyer Income | Highest incomes gained share in 2021

Lowest incomes lost nearly 2% of the market; Average income of vehicle buyer near $124,000

Source: Cox Automotive estimates from analysis of IHS-Markit registrations data
Higher vehicle prices leaving lower credit buyers behind – interest rate subvention declining

Source: Cox Automotive, Kelley Blue Book
Brand Purchase APRs | Converging towards “one” type of buyer

Deviation in decline as market becomes “same” customer – competition will be even more fierce

Brand APR Deviation from Nation Average
January 2019 = 2.3%
January 2022 = 1.4%

Source: Cox Automotive, Kelley Blue Book
Lower priced, better customer credit brands will be more insulated from rising rates.
New-Vehicle Market Summary | Q1 2022

Seller’s market continues throughout 2022 though economic and inventory challenges remain

Demand for vehicles to remain above available supply – keeping the seller’s market going in 2022

Biggest threats to 2022 sales recovery:

- **Chip shortage** – H2 production must be much better to meet our 15.3 million forecast
- **COVID** – new variants could disrupt the economy and supply chain
- **Higher interest rates** – impacting affordability
- **Ukraine War** – gas prices, raw materials, supply chain vulnerable

The path ahead:

- Re-stocking dealer lots will be slow throughout 2022 and into 2023 – ability and enthusiasm will vary
- Vehicle mix coming likely to continue to be high margin and higher contented
- Fleet and Lease sales likely to remain muted – provides OEMs opportunities to stay “lean and mean”
- Higher interest rates will have a varied impact on buyers – some brands more vulnerable than others
Chris Frey
Senior Manager, Economic and Industry Insights
Used-Vehicle Supply | Supply rising into spring

Slow sales lifting days of supply above 2021, similar to 2019 levels

Available Supply  weekly

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>2,900,000</td>
<td>2,800,000</td>
<td>2,600,000</td>
<td>2,400,000</td>
</tr>
<tr>
<td>Feb</td>
<td>2,700,000</td>
<td>2,600,000</td>
<td>2,400,000</td>
<td>2,200,000</td>
</tr>
<tr>
<td>Mar</td>
<td>2,500,000</td>
<td>2,400,000</td>
<td>2,200,000</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

Days of Supply  weekly

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Feb</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Mar</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: vAuto and Cox Automotive Estimates
No price collapse expected due to on-going constrained supply, but growth rate will fall

Used-Vehicle Prices | Up 28% year over year

Average List Price weekly

Source: Cox Automotive VMA Database
Price Movement | Prices finding footing in spring market

Tax return delays suppressing price action compared to 2021

Source: Cox Automotive
Retail Inventory | Highest price range has highest share in Q1 2022

Affordability likely to be a theme in 2022 as supply pushes prices higher

<table>
<thead>
<tr>
<th>Price Range</th>
<th>Average List Price</th>
<th>Average Mileage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-21</td>
<td>Mar-22</td>
<td></td>
</tr>
<tr>
<td>$0K-$10K</td>
<td>$21,493</td>
<td>67,010</td>
</tr>
<tr>
<td>$10K-$15K</td>
<td>$27,398</td>
<td>70,824</td>
</tr>
<tr>
<td>$15K-$20K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20K-$25K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25K-$30K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$30K-$35K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$35K+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Cox Automotive VMA Database
Many factors contributing to a reduced 2022 SAAR

Source: Cox Automotive Estimates
2022 Outlook and Playlist
Ten Predictions for 2022

#1: Vehicle Demand Will Remain Robust

#2: Used-Vehicle Values Will Depreciate Again, After the Spring

#3: Tight Vehicle Supply Will Gradually Improve

#4: EV Growth Will Outpace Industry

#5: Auto Loan Rates Will Rise

#6: Lease Demand Will Improve in 2022

#7: Robust Service Revenue Opportunity Will Continue

#8: Dealership Consolidation Will Continue

#9: Consumer Shift To Online Becomes Dominant

#10: Direct Sales Model Will Force Dealers To Adapt
<table>
<thead>
<tr>
<th>Category</th>
<th>Forecast</th>
<th>Q2 Update</th>
<th>Change</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Sales</td>
<td>15.3M</td>
<td>15.3M</td>
<td>-0.0M</td>
<td>Indicates decrease from Q1 forecast</td>
</tr>
<tr>
<td>New Retail Sales</td>
<td>13.3M</td>
<td>13.3M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>Fleet Sales</td>
<td>2.0M</td>
<td>2.0M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>New Lease Volume</td>
<td>2.9M</td>
<td>2.9M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>Lease Penetration</td>
<td>22%</td>
<td>22%</td>
<td>-1%</td>
<td></td>
</tr>
<tr>
<td>CPO Sales</td>
<td>2.8M</td>
<td>2.8M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>Used Sales</td>
<td>39.3M</td>
<td>39.3M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>Used Retail Sales</td>
<td>20.7M</td>
<td>20.7M</td>
<td>-0.0M</td>
<td></td>
</tr>
<tr>
<td>Manheim Used Vehicle Value Index</td>
<td>-3%</td>
<td>-3%</td>
<td>-3%</td>
<td></td>
</tr>
</tbody>
</table>
Playlist

Hot Stuff
By Kygo and Donna Summer

Whatever It Takes
By Imagine Dragons

Never Going Back Again
By Johnning

Can I Get It
By Adele

Inflation

The Fed and Interest Rates

Vehicle Supply

Rental Cars
More Auto Industry Data and Insights from Cox Automotive

The go-to source for insights based on the largest breadth of first-party data in the automotive ecosystem

Cox Automotive Newsroom: www.coxautoinc.com/newsroom/
Fresh content from Chief Economist Jonathan Smoke and the Industry Insights team is published regularly.

Auto Market Snapshot: www.coxautoinc.com/marketsnapshot
This dashboard is a one-stop dashboard for the most recent data points our team is tracking.

From the Newsroom: www.coxautoinc.com/signup
The Cox Automotive biweekly newsletter, published every other Tuesday, is a round-up of news from Cox Automotive and perspectives from its analysts and experts on topics dominating the automotive industry.
Thank you for attending!

Contact us with questions or to speak with an expert:

Dara Hailes
Manager, Cox Automotive Public Relations
dara.hailes@coxautoinc.com

Mark Schirmer
Director, Cox Automotive Public Relations
mark.schirmer@coxautoinc.com