

Auto Industry Hot Topics

Virtual Conference

Wednesday, October 14th



S&P Global
Ratings

Welcome



Moderator: Nishit Madlani

Director & Lead Analyst, U.S. Autos
S&P Global Ratings

S&P Global
Ratings

The U.S. Economic Outlook: What Will the Post Pandemic Economy Look Like in 2021?



Satyam Panday

Ph.D., U.S. Senior Economist
S&P Global Ratings Research

S&P Global
Ratings

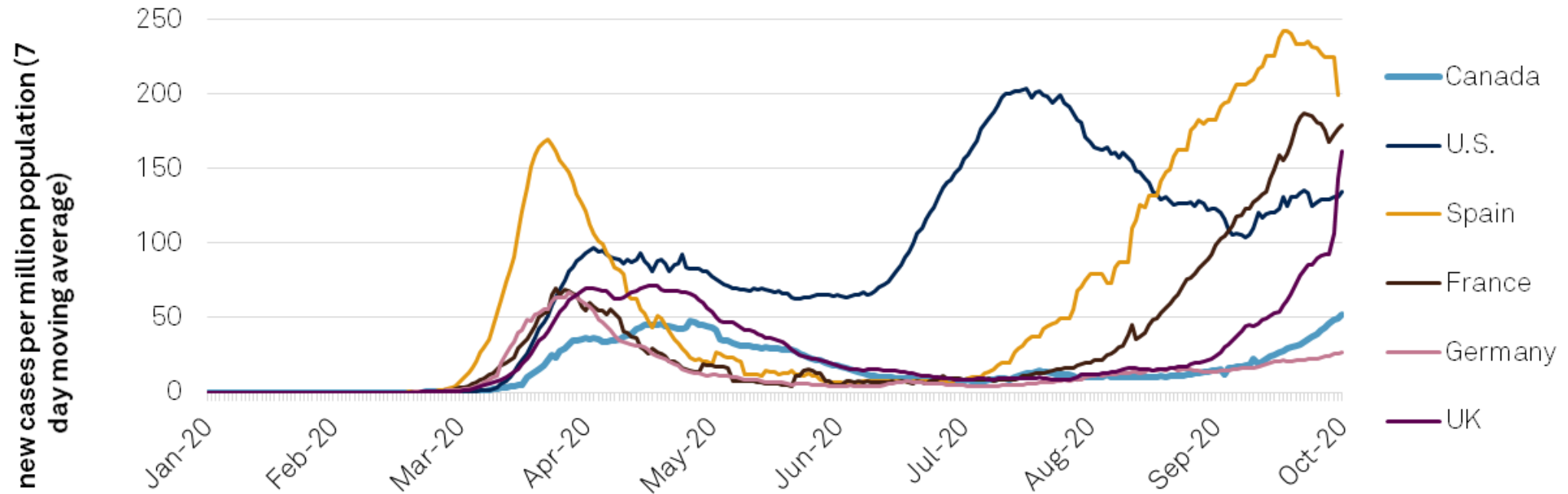
Story of the Pandemic-- Not Over Yet

Key Features

- The global economy faced a **massive adverse shock** from the sharp increase in COVID-19.
- It was a **policy choice to lockdown the country** in the first place to limit the spread of the virus that could overwhelm the health care system.
- Paradoxically, **containment comes at an economic cost**--in this case a sharp economic contraction not seen before in the post-World War II era.
- Unprecedented policy response**--from both fiscal and monetary authorities--has provided a bridge to recovery.
- Nearly five months into the recovery since lockdown restrictions eased, **the bounce in economic activity has surprised to the upside**.
- Still, **the level of activity remains two-fifth below normal**, and **the recovery has been uneven**.
- It **will be a more gradual and protracted growth from here onwards**. The upside for sectors quick out of the gates has diminished and sectors still below normal continue to face virus-related challenges.
- In our macro forecast, **we assume a vaccine will be widely available in mid-2021**, with a modest chance it could be earlier.

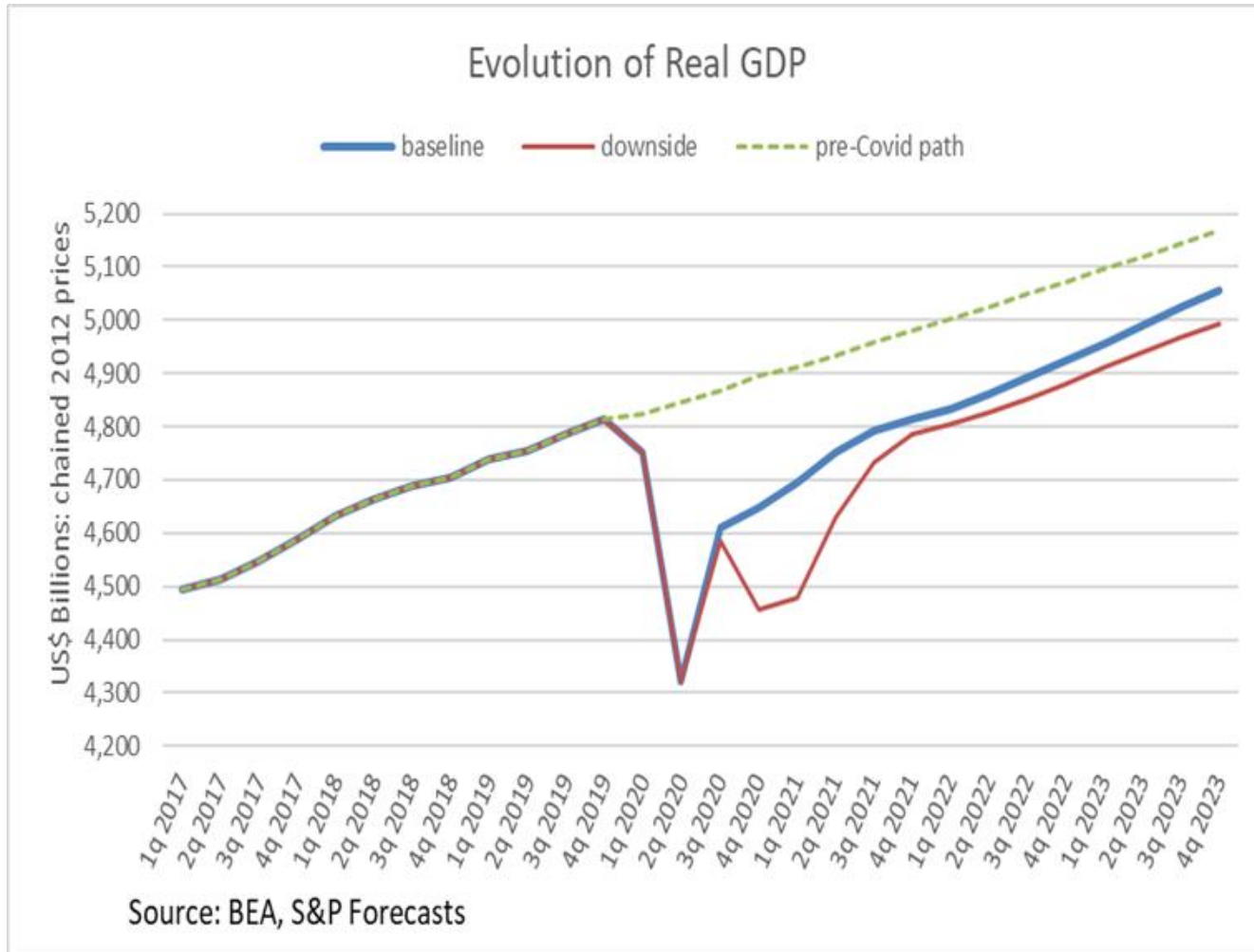
Second Wave Rising Threatening Mobility Yet Again

New Cases Per Million Population Are Rising Again In The US and Europe



Source: S&P Global Ratings, Ourworldindata.org, S&P Global Economics, Data as of Oct, 6 2020.
Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

The Recovery Has Begun With Downside Risks



Cumulative peak-to-trough GDP decline: 10.1%
(from Q4 2019 to Q2 2020)

S&P's Baseline real GDP Forecasts:

- 4.0% in 2020
- +3.9% in 2021
- +2.4% in 2022

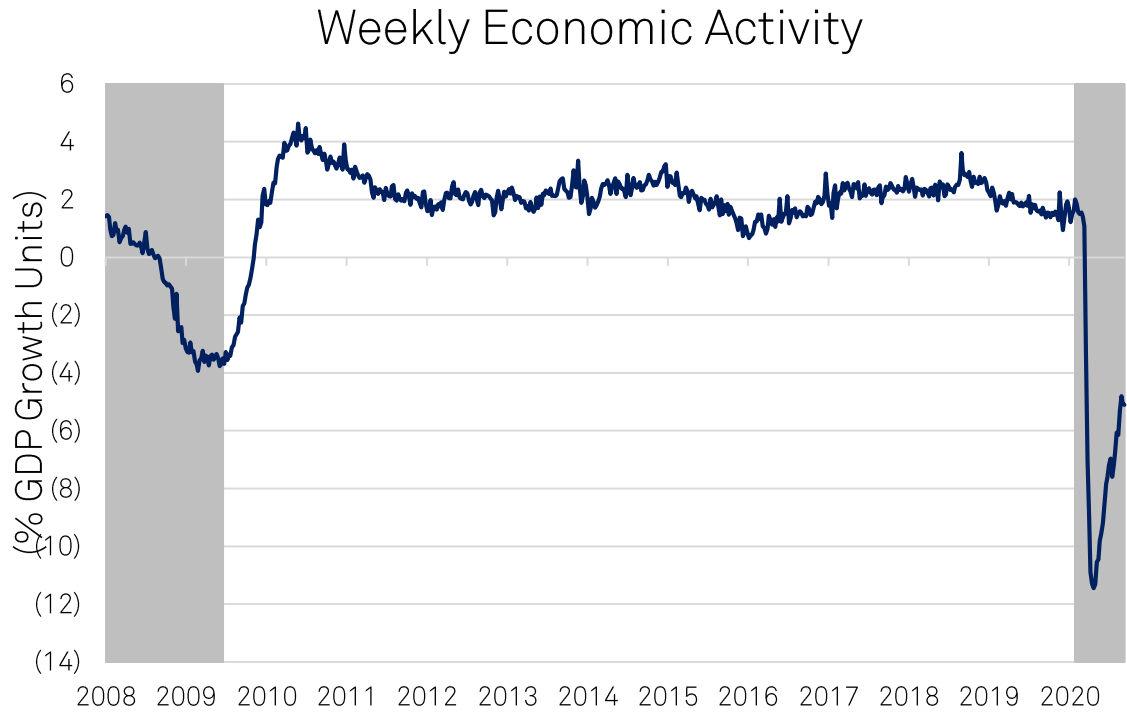
The economy gets back to Q4 2019 size by
sometime in Q4 2021

By Q4 2023 (our forecast horizon), the economy
is still 2.2% below our pre-virus December
baseline

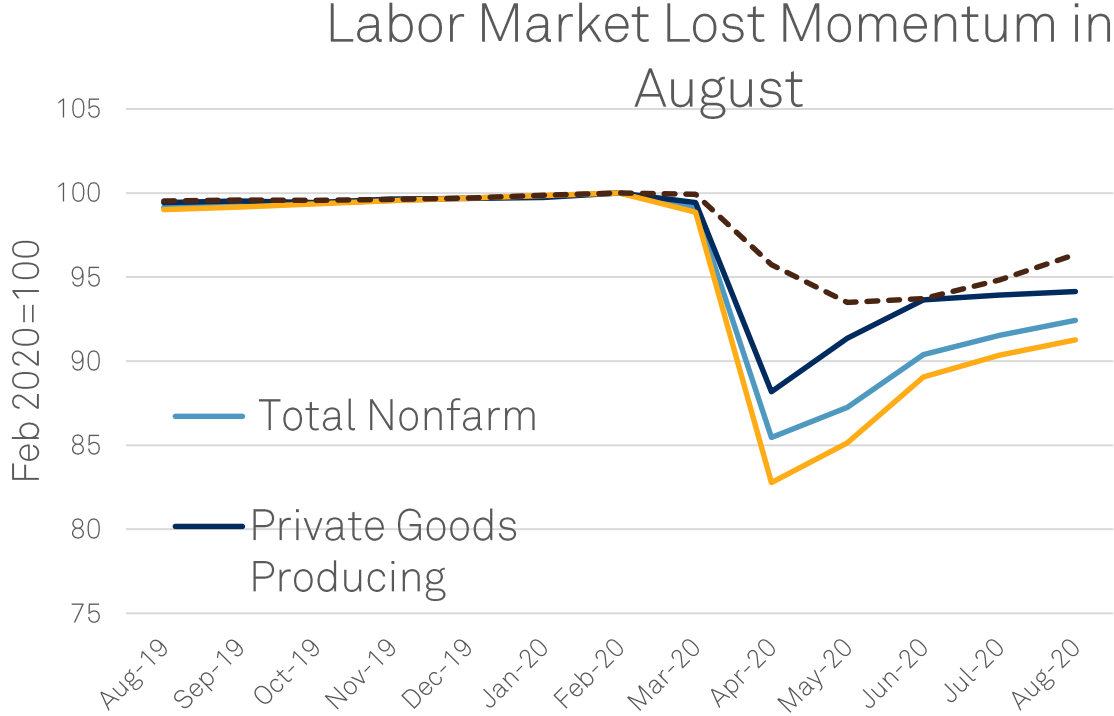
Risk to baseline forecast to the downside

- Key risks: Fiscal Fatigue, Second Wave of Virus Spread
 - At this early stage, the risks of policy intervention are still asymmetric.

Momentum Has Slowed Down Little More Than Half Recovered



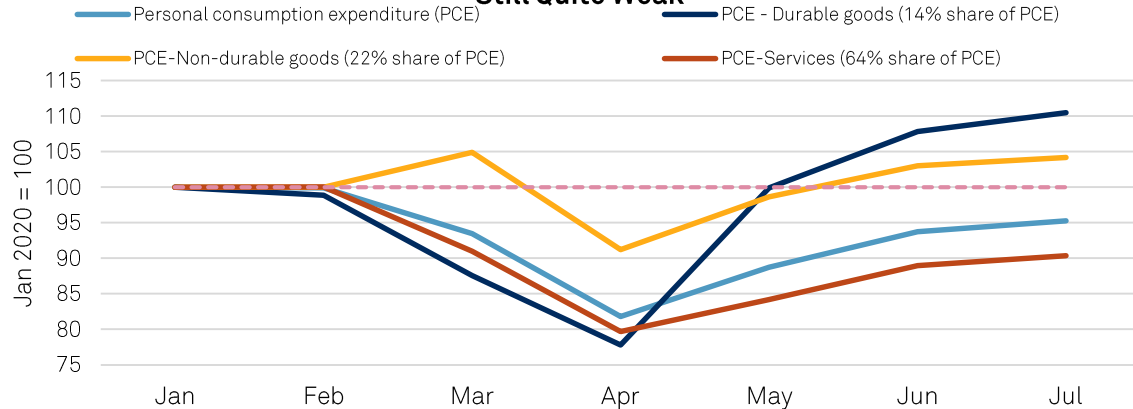
Source: New York Federal Reserve, Data as of Sep 25, 2020.



Source: BLS, S&P Global Economics

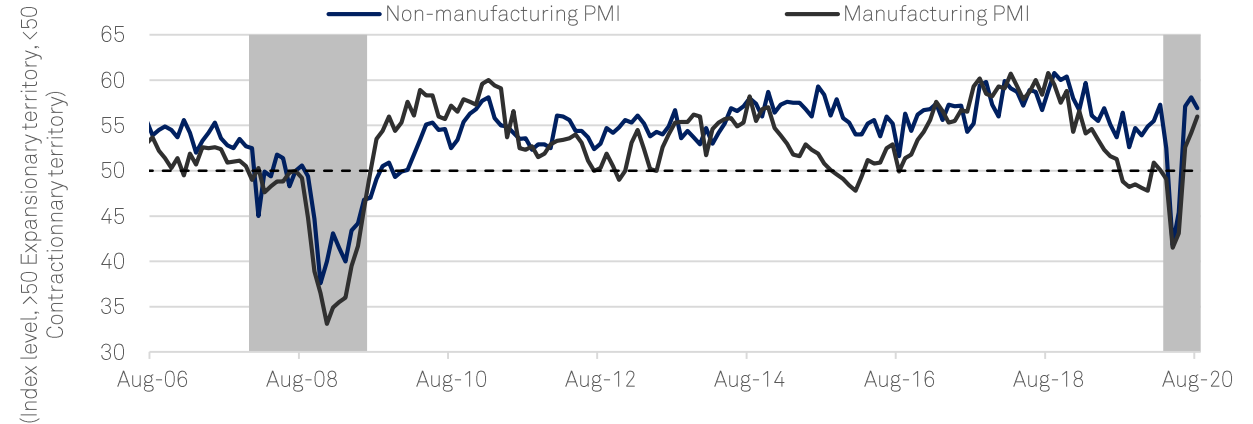
Snapshot of Selected Indicators

Uneven Rebound In Spending - Goods Sector Strong While Services Still Quite Weak



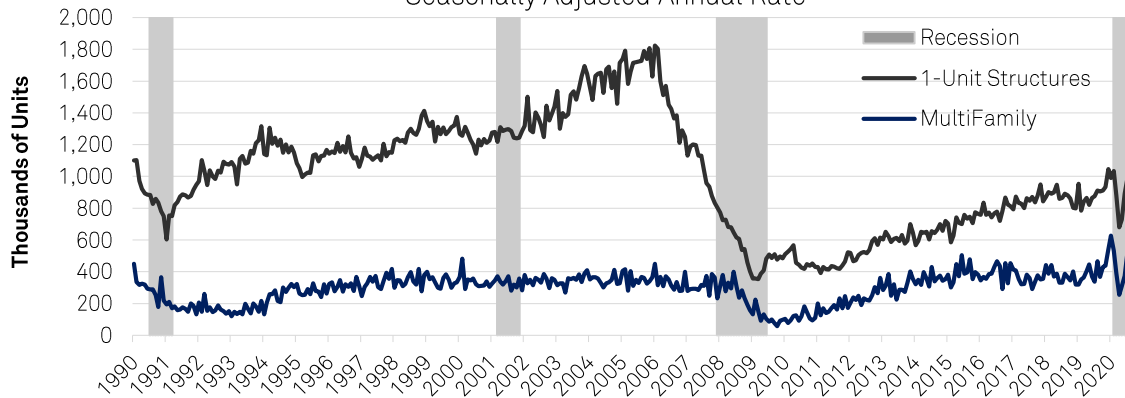
Source: BEA, S&P Global Economics, Note share calculated based on January 2020

Business Sentiments



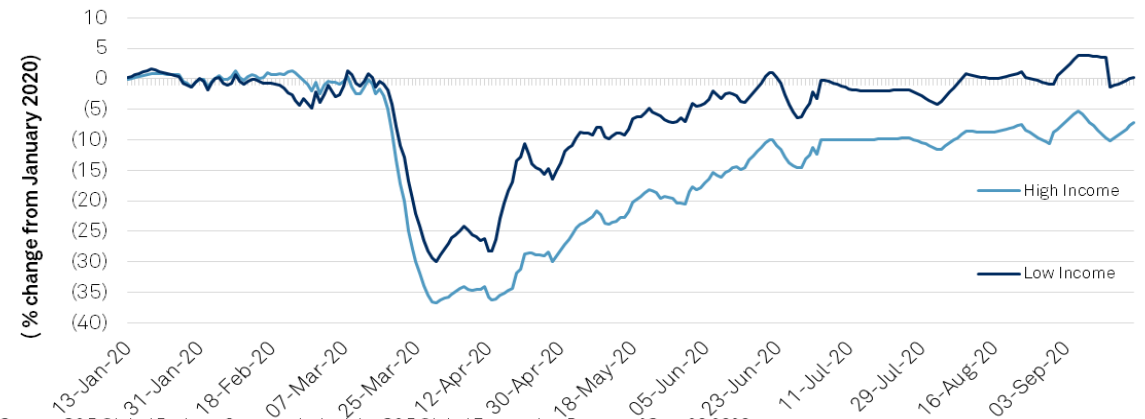
Source: ISM, S&P Global Economics

Housing Start Seasonally Adjusted Annual Rate



Source: Census Bureau, S&P Global Economics, Data as of Aug 2020
Note: Multifamily starts is Housing start of 2-4 Units plus 5-Unit Structures

Consumer Spending Tracker-- Range Bound Since July (New Normal Till Vaccine?)



Source: S&P Global Ratings, Opportunity Insight, S&P Global Economics, Data as of Sep, 20 2020
Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

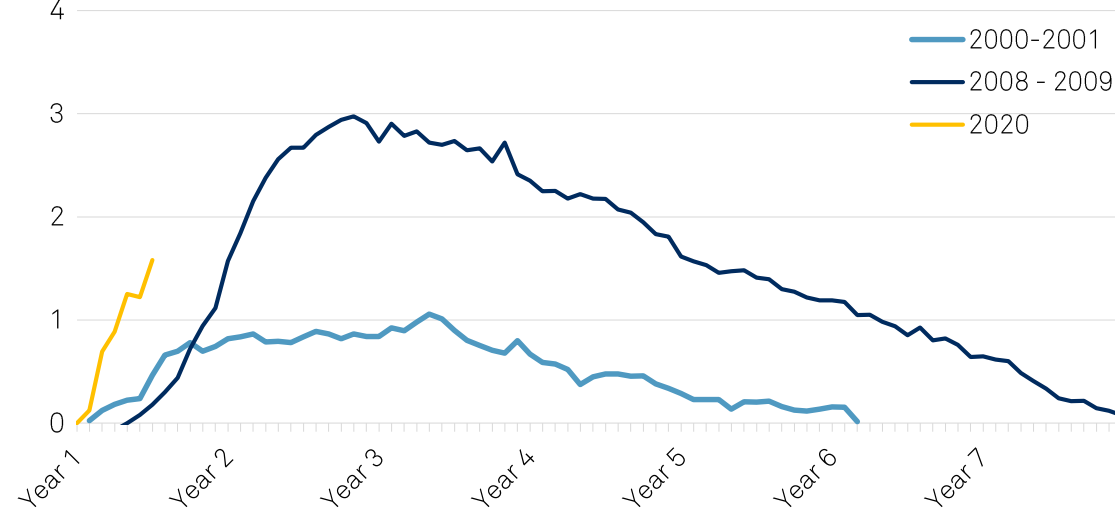
Labor Market Recovery

Unemployment rate is likely to get under 4% only past 2023

Unemployment Rate



Share of Unemployment Individuals permanently unemployment individuals relative to labor force is rising, (% change from peak employment)



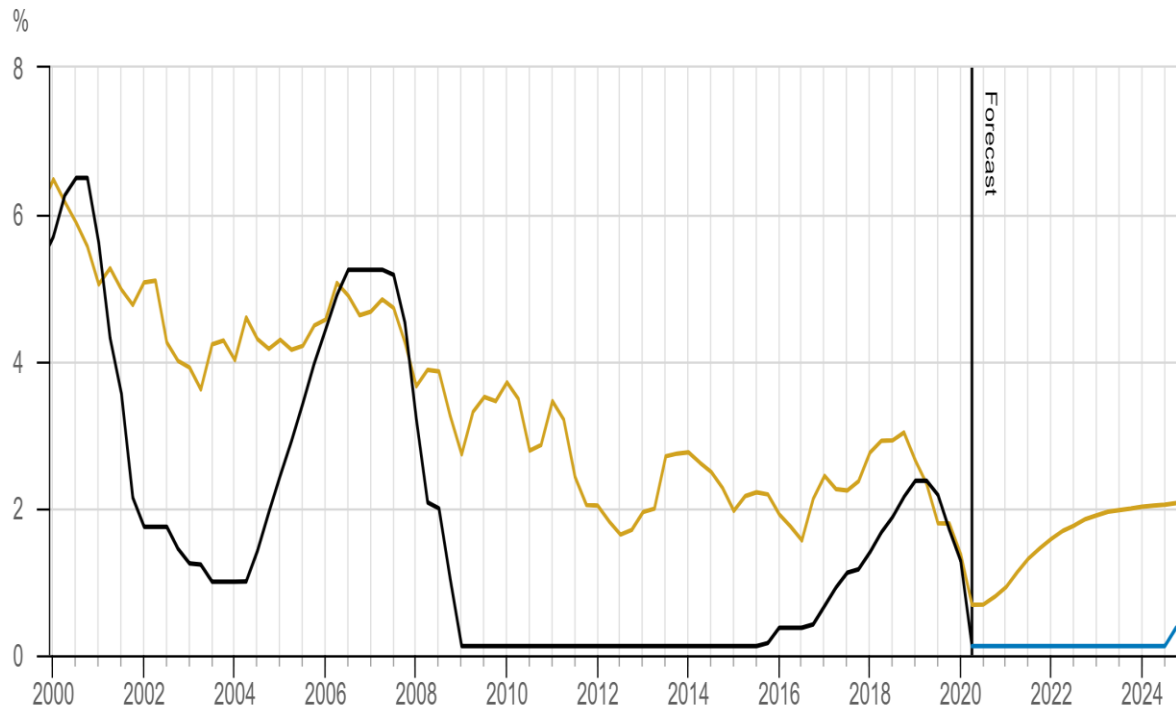
Source: Oxford Economics, BLS, S&P Global Economics forecasts, Data as of Aug, 2020. Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

Interest Rates-- Lower For Longer With The Fed's Revised Monetary Framework

Core-PCE Inflation (Y/Y % change)



10-yr Treasury and Fed Funds Rate



Summary of Forecasts

S&P Economic Overview (U.S.)					Baseline
September 2020					
	2019	2020f	2021f	2022f	2023f
Key Indicator					
Real GDP (year % ch.)	2.2	-4.0	3.9	2.4	2.6
Real GDP (Q4/Q4 % ch.)	2.3	-3.4	3.6	2.3	2.6
Real Consumer Spending (year % ch.)	2.4	-4.4	4.9	3.1	2.9
Real Equipment Investment (year % ch.)	2.1	-8.9	8.2	4.8	4.2
Real Nonresidential Structures Investment (year % ch.)	-0.6	-9.3	2.8	3.5	4.2
Real Residential Investment, (year % ch.)	-1.7	0.2	2.2	4.4	4.5
Core CPI (year % ch.)	2.2	1.6	1.9	1.9	1.9
Unemployment Rate (%)	3.7	8.4	6.7	5.7	4.7
Housing Starts (annual total in mil.)	1.3	1.3	1.3	1.4	1.4
Light Vehicle Sales (annual total in mil.)	17.1	14.1	15.2	15.7	16.2
Federal Reserve's Fed Funds Policy Target Rate Range (Year-end %)	1.5-1.75	0 - 0.25	0 - 0.25	0 - 0.25	0 - 0.25
Note: All percentages are annual averages percent change, except for real GDP Q4/Q4. Core CPI is consumer price index excluding energy and food components. f--forecast. Forecasts were generated before the third estimate of Q2 2020 GDP was published by the BEA. Source: BEA, Oxford Economics, S&P Global Economics Forecasts.					

Economic Research: The U.S. Economy Reboots, With Obstacles Ahead

Published: September 24, 2020

<https://www.spglobal.com/ratings/en/research/articles/200924-economic-research-the-u-s-economy-reboots-with-obstacles-ahead-11666174>

Panel Discussion: Credit Outlook for Global Autos



**Moderator:
Nishit Madlani**

Director & Lead Analyst,
U.S. Autos
S&P Global Ratings



David Binns

Associate Director,
U.S. Autos
S&P Global Ratings



Vittoria Ferraris

Senior Director, Global
Sector Lead Automotive
S&P Global Ratings



Lawrence Orlowski

Director, U.S. Autos
S&P Global Ratings

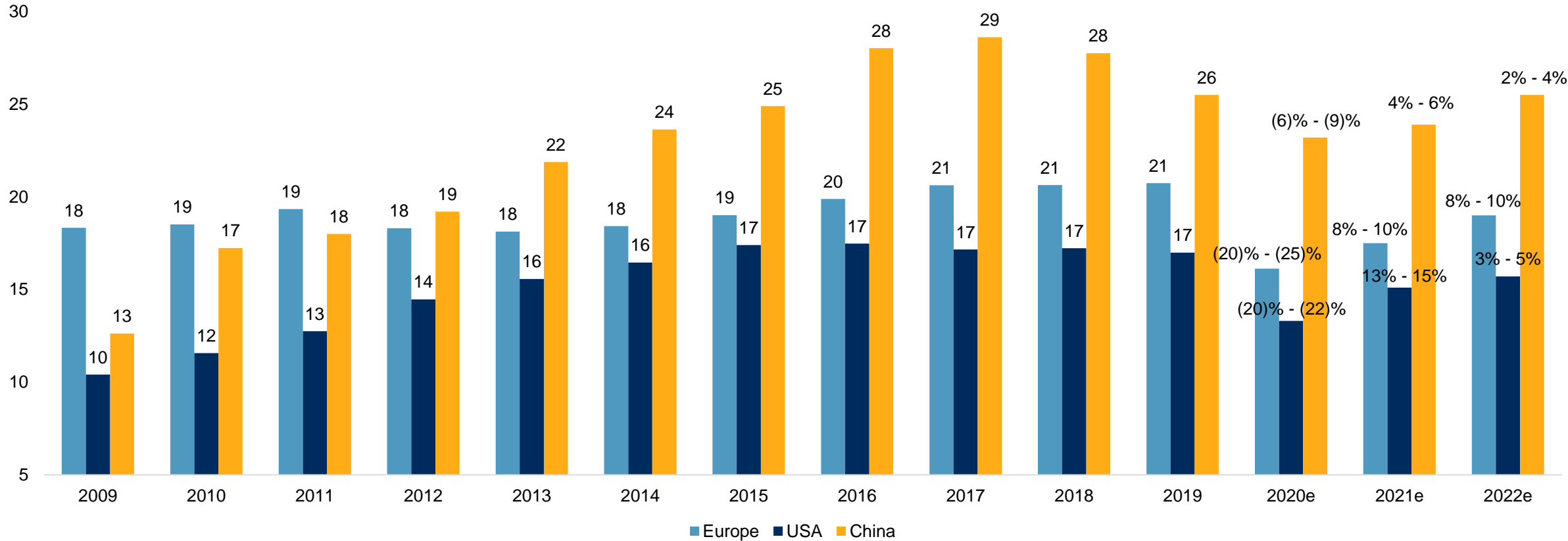


Lukas Paul

Director, Lead Analyst,
EMEA Autos
S&P Global Ratings

Global Volumes Unlikely To Reach Pre-Crisis Levels by 2022

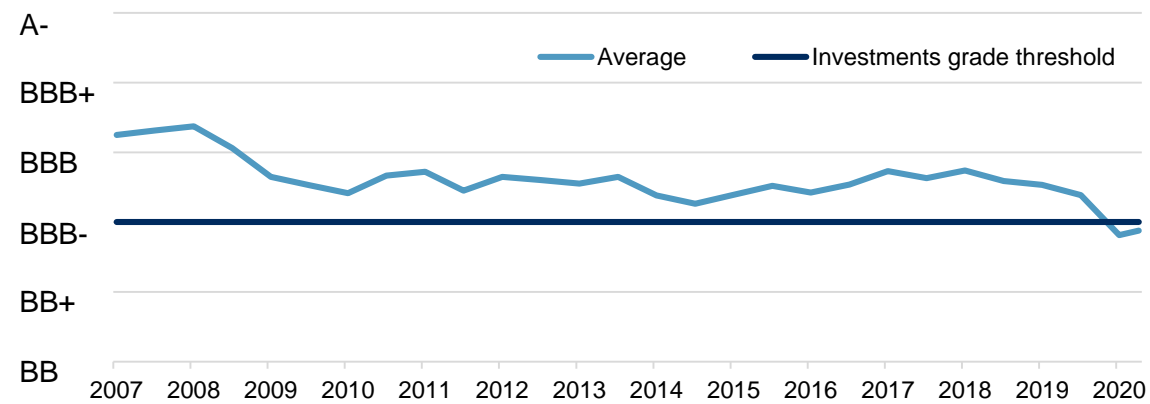
Global Light Vehicle Sales Per Key Market (units mil. and changes y-o-y in %)



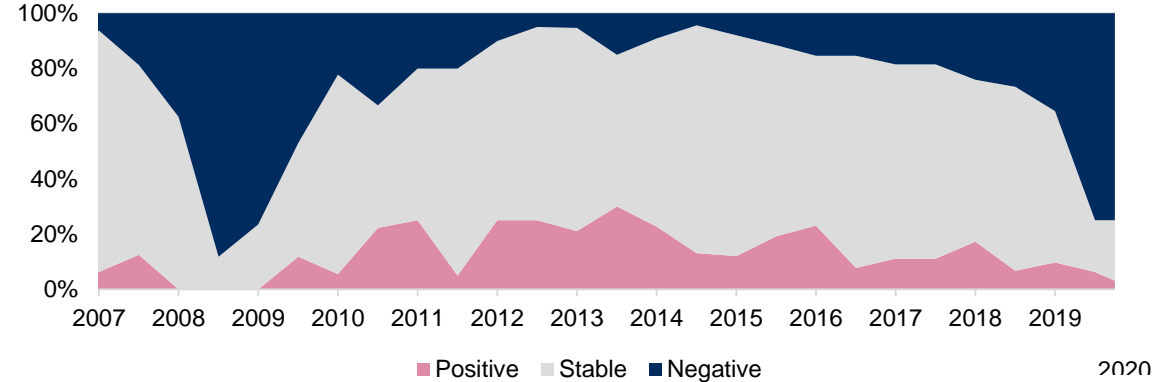
Source: S&P Global Ratings, LMC Automotive

Industry Challenges Will Limit Ratings Upside Post-COVID

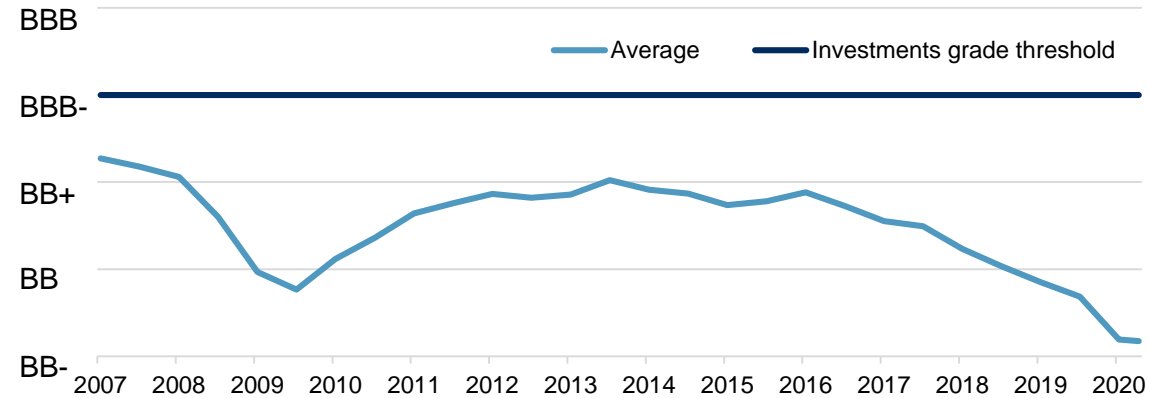
OEMs – Rating Evolution Since 2007



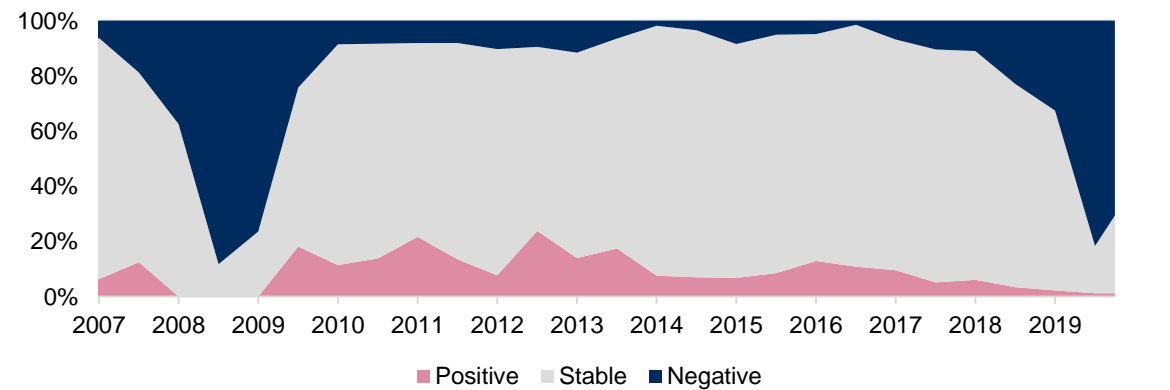
OEMs – Outlook* Distribution Evolution Since 2007



Auto Suppliers – Rating Evolution Since 2007



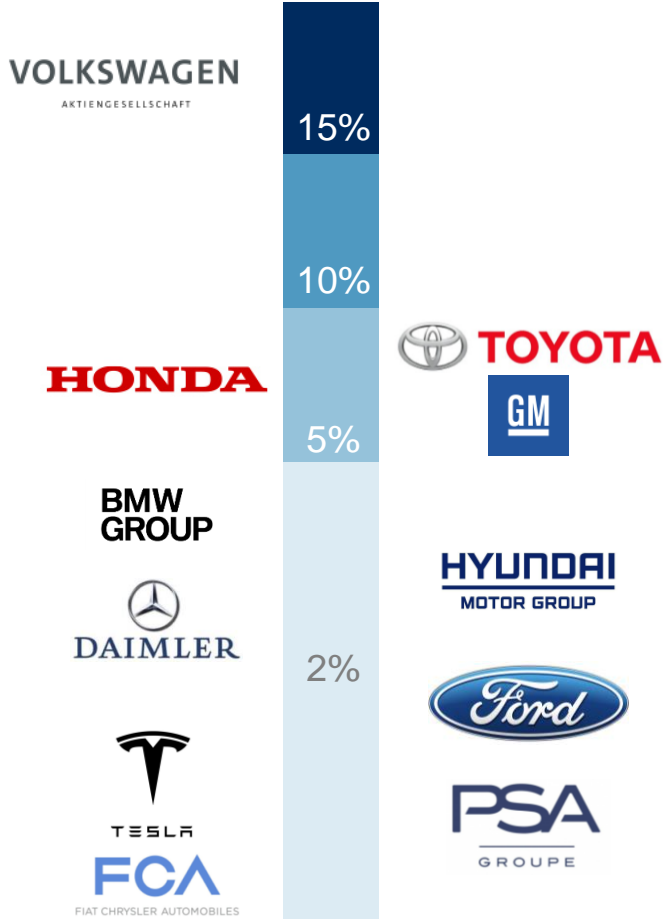
Auto Suppliers – Outlook* Distribution Evolution Since 2007



* Negative outlook includes negative CreditWatch, positive Outlook includes positive CreditWatch. Ratings as of September 15, 2020. Source: S&P Global Ratings

China - A Key Credit Factor For Competitive Position

Market Shares In China



	OEMs	Local prod. 2020 vs. 2017
European OEMs	BMW Group	Green Up Arrow
	Daimler Group	Green Up Arrow
	Fiat Chrysler Automobiles	Red Down Arrow
	Volkswagen Group	Yellow Right Arrow
	PSA Group	Red Down Arrow
	Renault Group	Red Down Arrow
US OEMs	Ford Group	Red Down Arrow
	General Motors Group	Red Down Arrow
	Tesla Motors	Green Up Arrow
Asian OEMs	Toyota Group	Yellow Right Arrow
	Honda Group	Red Down Arrow
	Hyundai Group	Red Down Arrow

Source: LMC Automotive

Market Consolidation Will Be Credit Neutral to Positive For Most

Mergers & Acquisitions

- ❖ PSA – FCA
- ❖ Geely – Volvo
- ❖ Borg Warner – Delphi
- ❖ VW – JAC

Partnerships

- ❖ Daimler – Volvo (Hydrogen technology)
- ❖ Daimler – NVIDIA (Autonomous driving)
- ❖ VW – Ford (Autonomous Driving, EV)
- ❖ GM-Honda (Platform sharing, EV)
- ❖ Valeo – Siemens (PHEV & BEV)
- ❖ Faurecia – Michelin (Hydrogen techn.)

Key Observations

1

- ❖ Some well-publicized partnerships have failed to generate game-changing benefits for ratings of partners (VW-Suzuki, Renault-Nissan).

2

- ❖ However, with high investments ahead, the case for partnerships is more pressing than ever, and potentially even greater for suppliers than OEMs.

3

- ❖ Long-term value will shift from hardware to software, connectivity, and digital services, increasing reliance on tech sector partners.
- ❖ Being left out of consolidation can result in gradual loss of competitiveness.

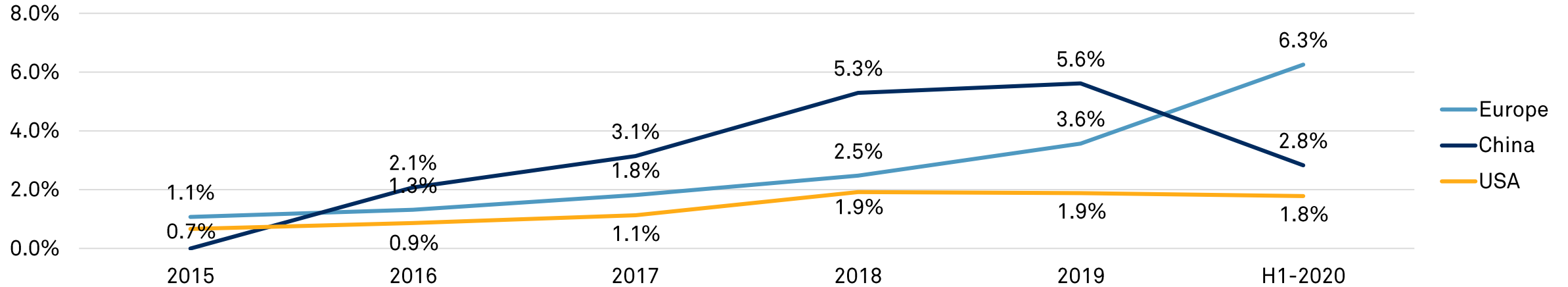
4

- ❖ Consolidation/partnerships among lower-rated issuers could be credit-positive, if properly managed and delivering clear benefits on scale/cost position, geographic diversification, product portfolio, technology etc.

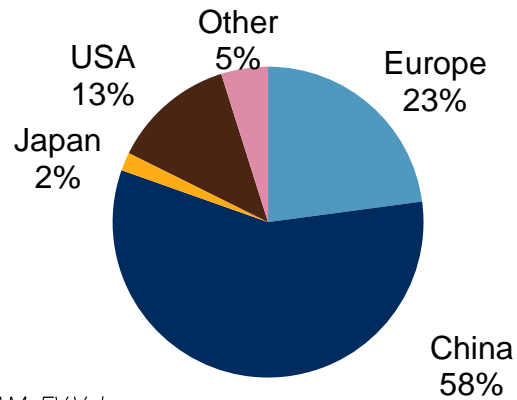
Sources: S&P Global Ratings

Electrification – Battleground Shifting To Europe

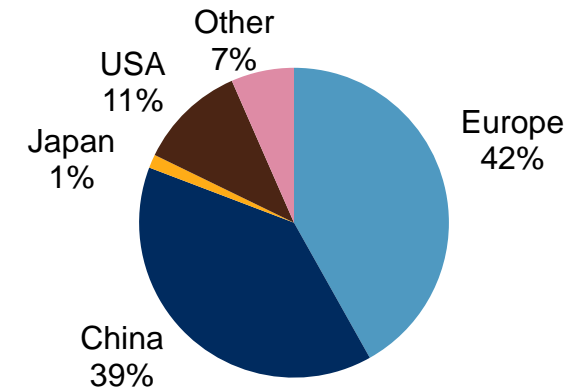
EV Sales As A Percentage Of Total LV Sales



H1-2019 – Total 1.1m EV units



H1-2020 – Total 1.0m EV units

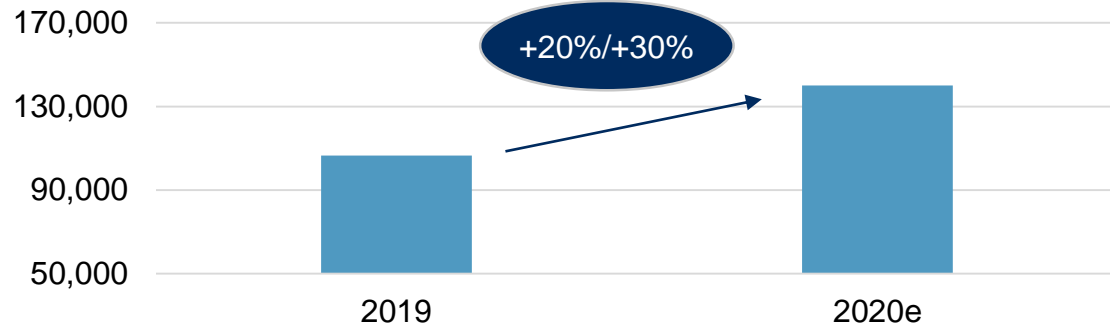


Sources: ACEA, CAAM, EV Volumes

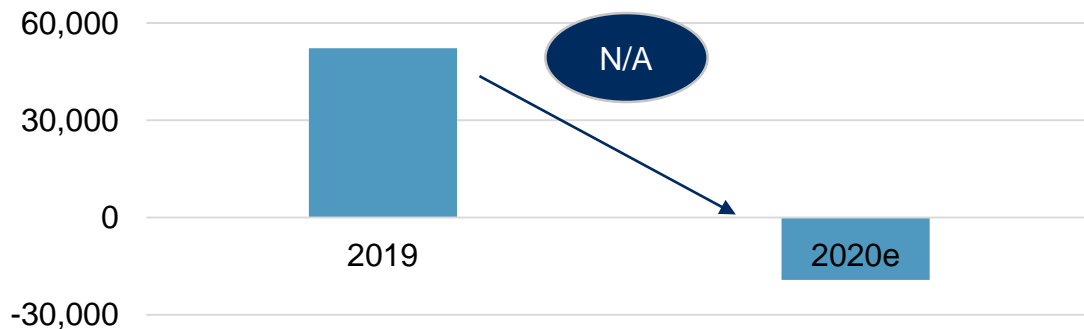
Weak 2020 Credit Metrics Reduce Firepower For Investments

OEMs

Adjusted Net Debt In USD (Million)



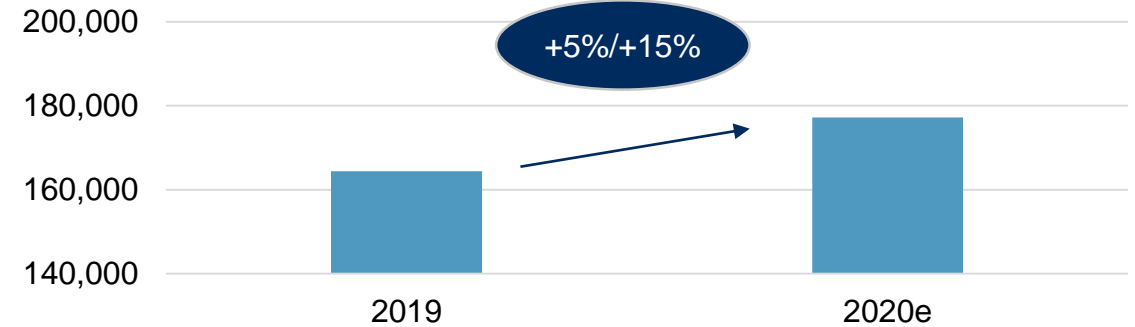
Free Operating Cash Flow In USD (Million)



Sources: S&P Global Ratings. * Excluding Tire Makers

Auto Suppliers*

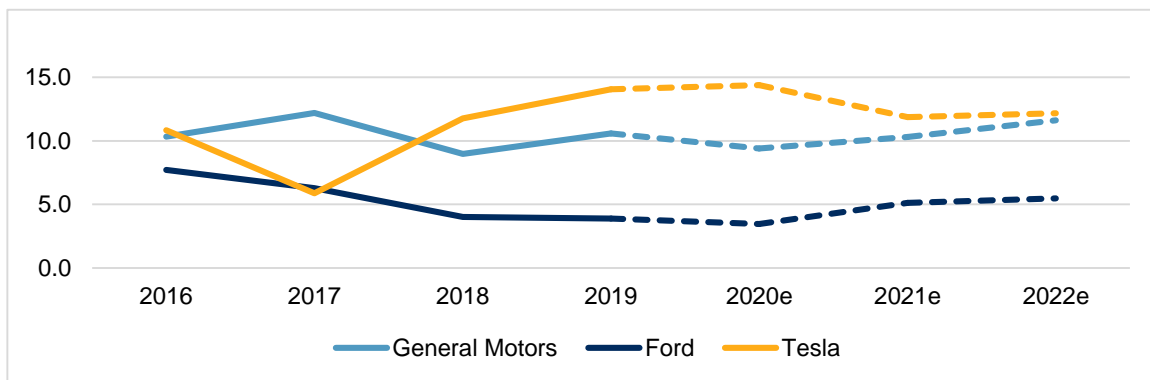
Adjusted Net Debt In USD (Million)



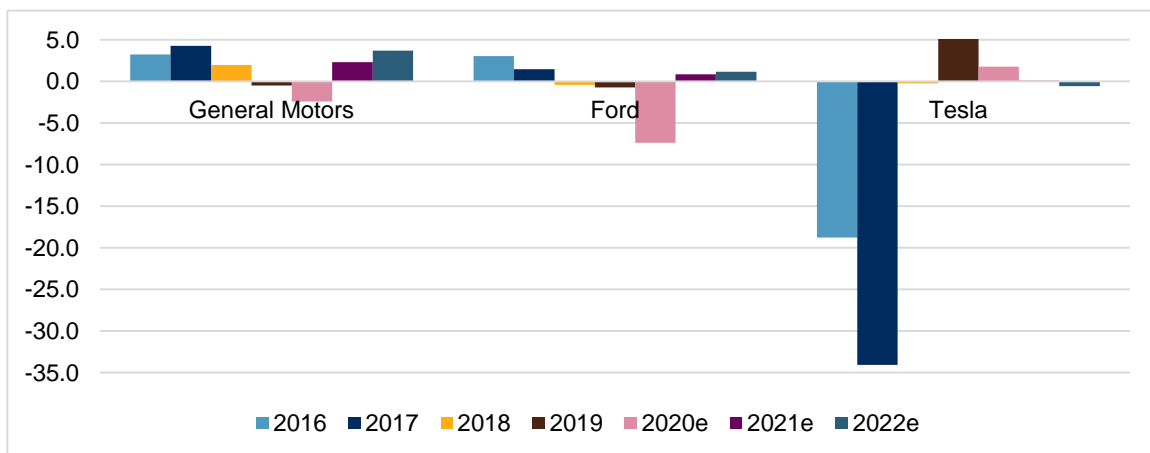
- ❖ 2020 will see a pronounced deterioration of credit metrics for OEMs and suppliers globally.
- ❖ Albeit crucial, successful cash management can somewhat lessen but not stop the pain.
- ❖ Large discrepancies in auto suppliers' FOCF – negative for nearly all but few large and diversified issuers.
- ❖ Rating transitions will center on expectations for credit metrics in 2021, but 2020 will weaken the starting point for issuers to weather the on-going industry transition.







North American OEMs - Profitability & Cash Flows Remain Will In The Spotlight

EBITDA Margin (%)



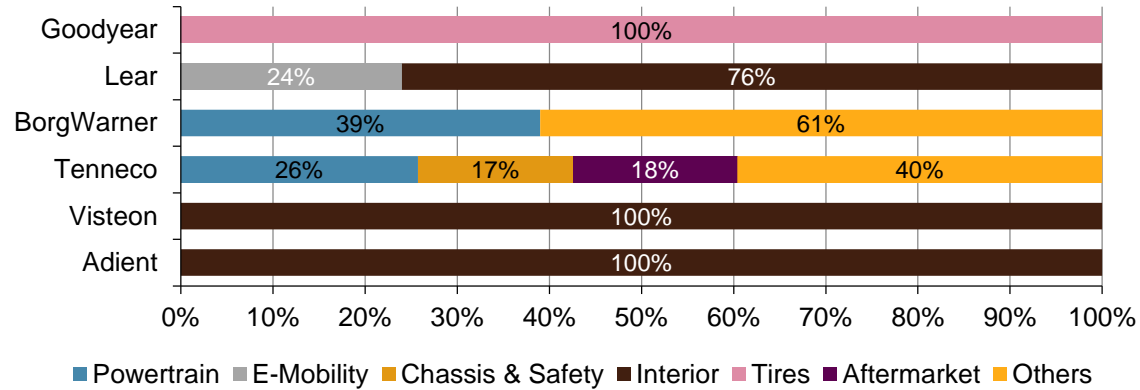
Free Operating Cash Flow To Sales (%)



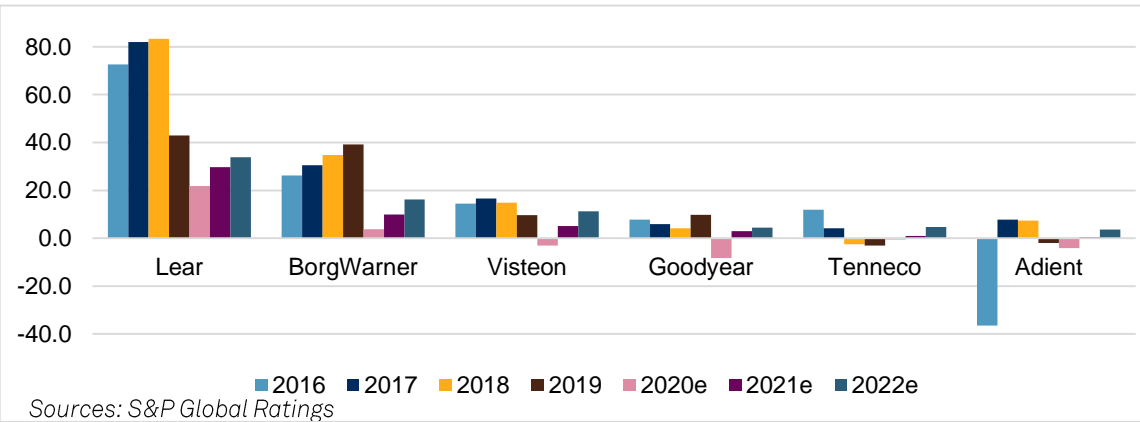
Company	Key Rating Drivers	Rating Headroom
	<ul style="list-style-type: none"> ❖ 2021 FOCF & EBITDA margin recovery ❖ Progress on restructuring ❖ Position in EVs vs. investment 	
	<ul style="list-style-type: none"> ❖ Reliance on pure electric than hybrid products ❖ Leverage reduction 	
	<ul style="list-style-type: none"> ❖ Consistent operational improvements ❖ Strengthening of market position resulting in improved credit metrics 	













North American Auto Suppliers - Realigning Business Models

Business Mix – 2019 Sales Breakdown



Free Operating Cash Flow To Debt (%)

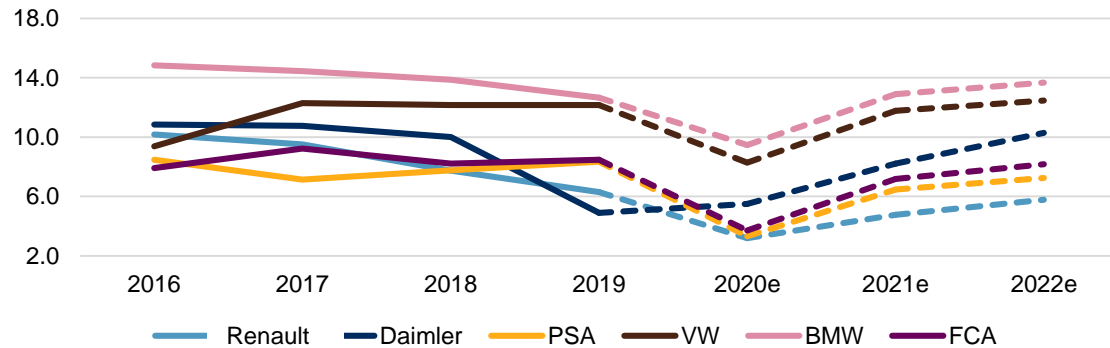


Company	Key Rating Drivers	Rating Headroom
	<ul style="list-style-type: none"> ❖ Uncertainty regarding demand of replacement tires ❖ Worsening of fixed-cost absorption amid its falling sales. 	
	<ul style="list-style-type: none"> ❖ EBITDA margins at or above 9% ❖ Maintain competitive position 	
	<ul style="list-style-type: none"> ❖ Integration of recently acquired Delphi ❖ Balanced approach on capital allocation with a commitment to debt reduction. 	
	<ul style="list-style-type: none"> ❖ Structural cost-reduction initiatives ❖ Spinoff of its DRiV business 	
	<ul style="list-style-type: none"> ❖ Market outgrowth leading to strong margin recovery ❖ Longer term lower cost structure due to ongoing restructuring 	
	<ul style="list-style-type: none"> ❖ Operational improvements and better commercial discipline ❖ Pruning of non-core operations 	

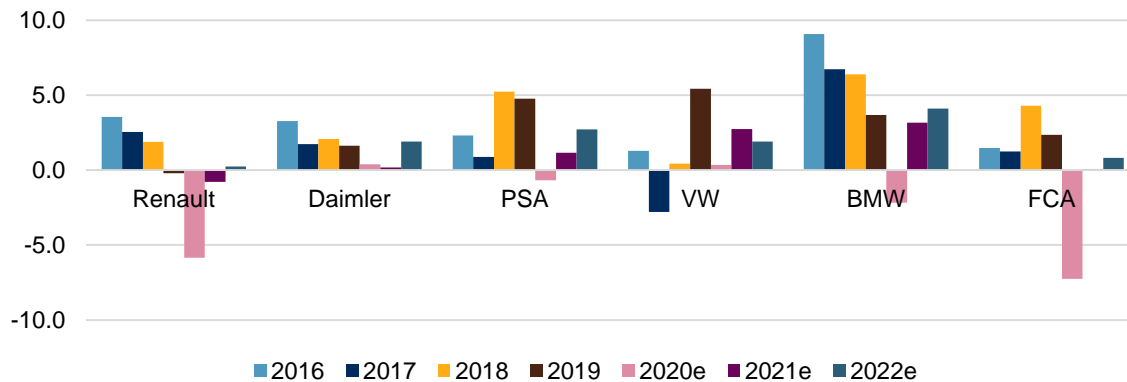
EMEA OEMs - Profitability & Cash Flows In The Spotlight

Long-Term Success Hinges On Electrification

EBITDA Margin (%)



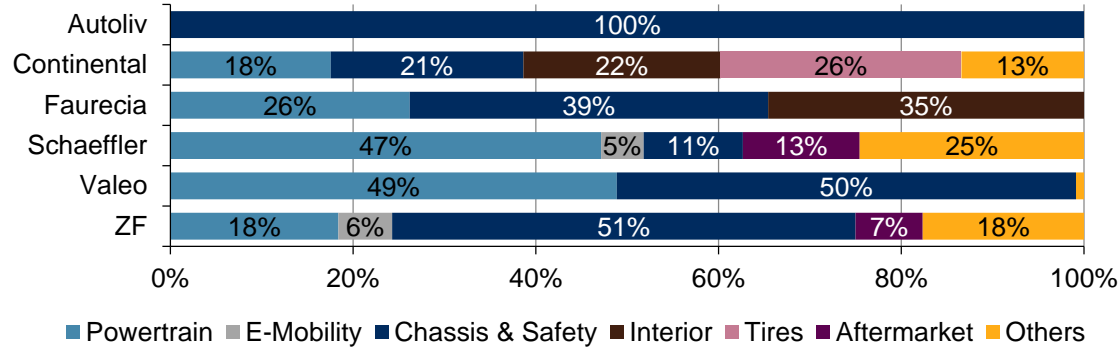
Free Operating Cash Flow To Sales (%)



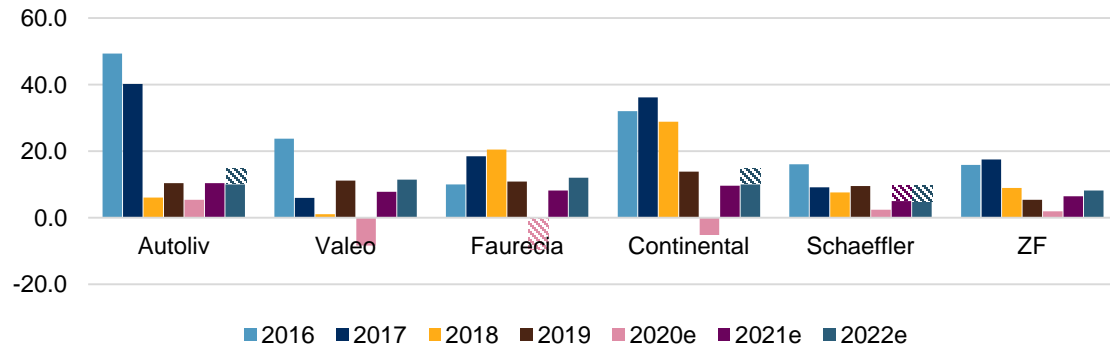
Company	Key Rating Drivers	Rating Headroom
BMW GROUP	<ul style="list-style-type: none"> ❖ 2021 FOCF & EBITDA margin recovery ❖ Position in EVs vs. profitability 	
DAIMLER	<ul style="list-style-type: none"> ❖ Execution on cost cutting and EVs ❖ Trajectory of one-off cost & cash items 	
VOLKSWAGEN <small>AKTIENGESELLSCHAFT</small>	<ul style="list-style-type: none"> ❖ Rebound of profitability in 2021 ❖ Aggressive M&A & proprietary tech strategy, strong footprint in China 	
PSA <small>GRUPE</small>	<ul style="list-style-type: none"> ❖ Recovery in tough European market ❖ Cost mgmt expertise, CO₂ performance 	
GRUPE RENAULT	<ul style="list-style-type: none"> ❖ Turnaround strategy under new CEO ❖ Return to positive FOCF 	
FCA <small>FIAT CHRYSLER AUTOMOBILES</small>	<ul style="list-style-type: none"> ❖ PSA Merger offsets stand-alone position ❖ Performance in tough Brazil & European markets, ability to catch up on electrification 	

EMEA Auto Suppliers – Realigning Business Models













Business Mix – 2019 Sales Breakdown



Free Operating Cash Flow To Debt (%)



Sources: S&P Global Ratings

Company	Key Rating Drivers	Rating Headroom
	<ul style="list-style-type: none"> Vitesco spin-off Industrial footprint rationalization 	
	<ul style="list-style-type: none"> Increase in content per car Maintain high market share 	
	<ul style="list-style-type: none"> Realignment of product portfolio and impact on profitability Leverage at IHO level 	
	<ul style="list-style-type: none"> Increase in content per car JV reaches breakeven 	
	<ul style="list-style-type: none"> Integration of recently acquired Wabco Industrial footprint rationalization 	
	<ul style="list-style-type: none"> Turnaround of Clarion Strict cost and investment discipline 	

Coffee Break

Program to Resume in 15 minutes

Tune in to hear LMC Automotive's Senior Vice President, Jeff Schuster's outlook on global auto sales, electrification of the power-train and potential winners/losers.



S&P Global
Ratings

LMC Automotive Views: Post Covid-19 Auto 2.0



Jeff Schuster

Senior Vice President
LMC Automotive

S&P Global
Ratings



Forecast Market
Growth Production

Impact

Global Automotive Path Forward

Jeff Schuster, LMC Automotive
14 October 2020



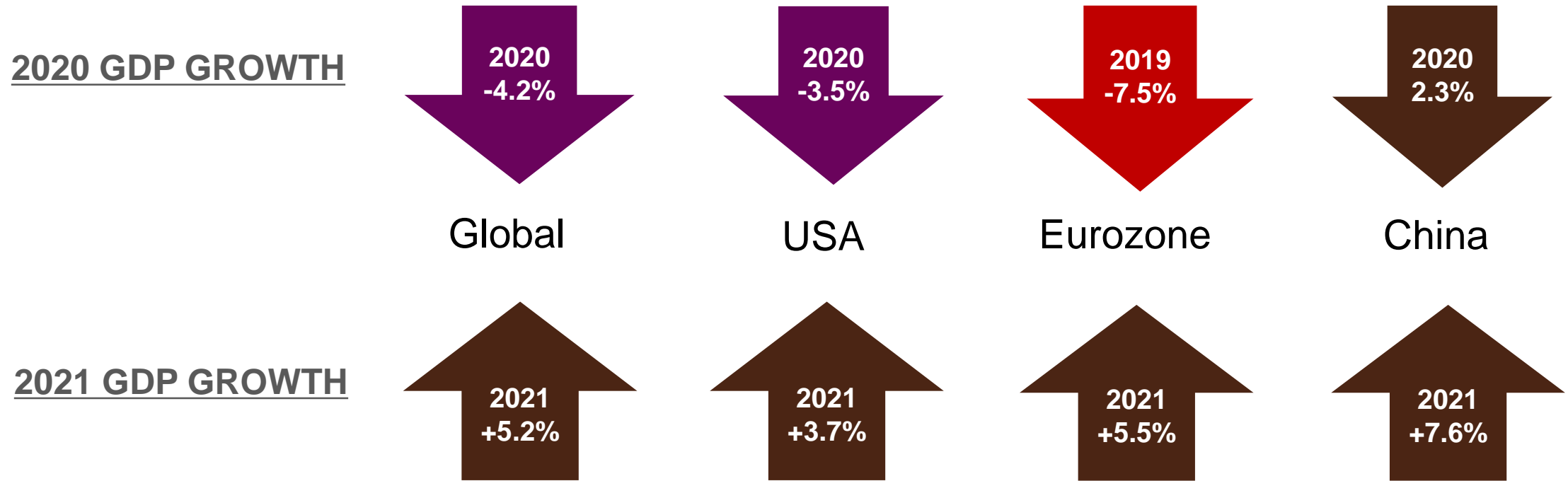
Outline

- **Current automotive environment**
- Trends and path forward

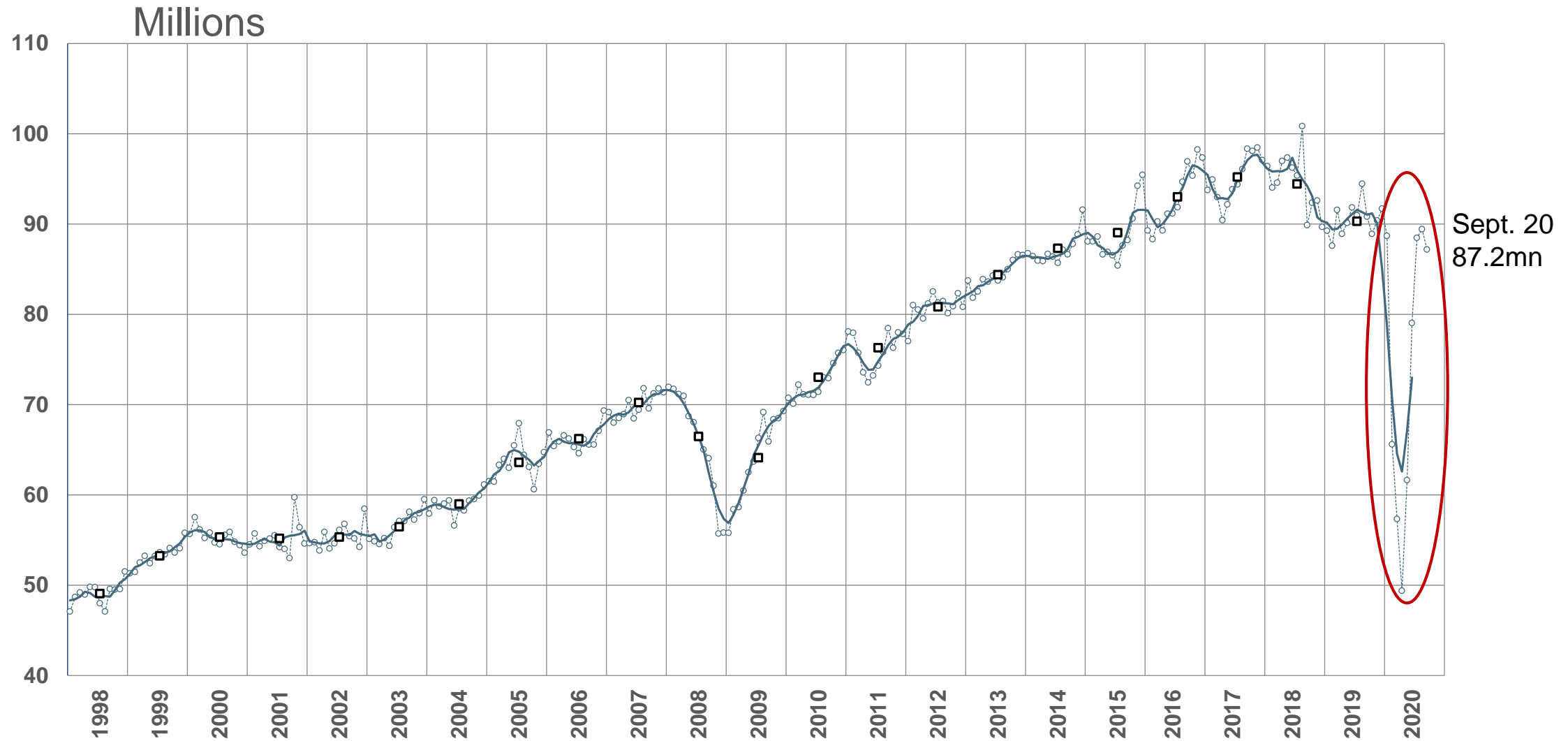
Most economies on a wild ride!

2020 – Deep but short global recession

2021 – Solid expected recovery...not without risks!



Global Light Vehicle sales

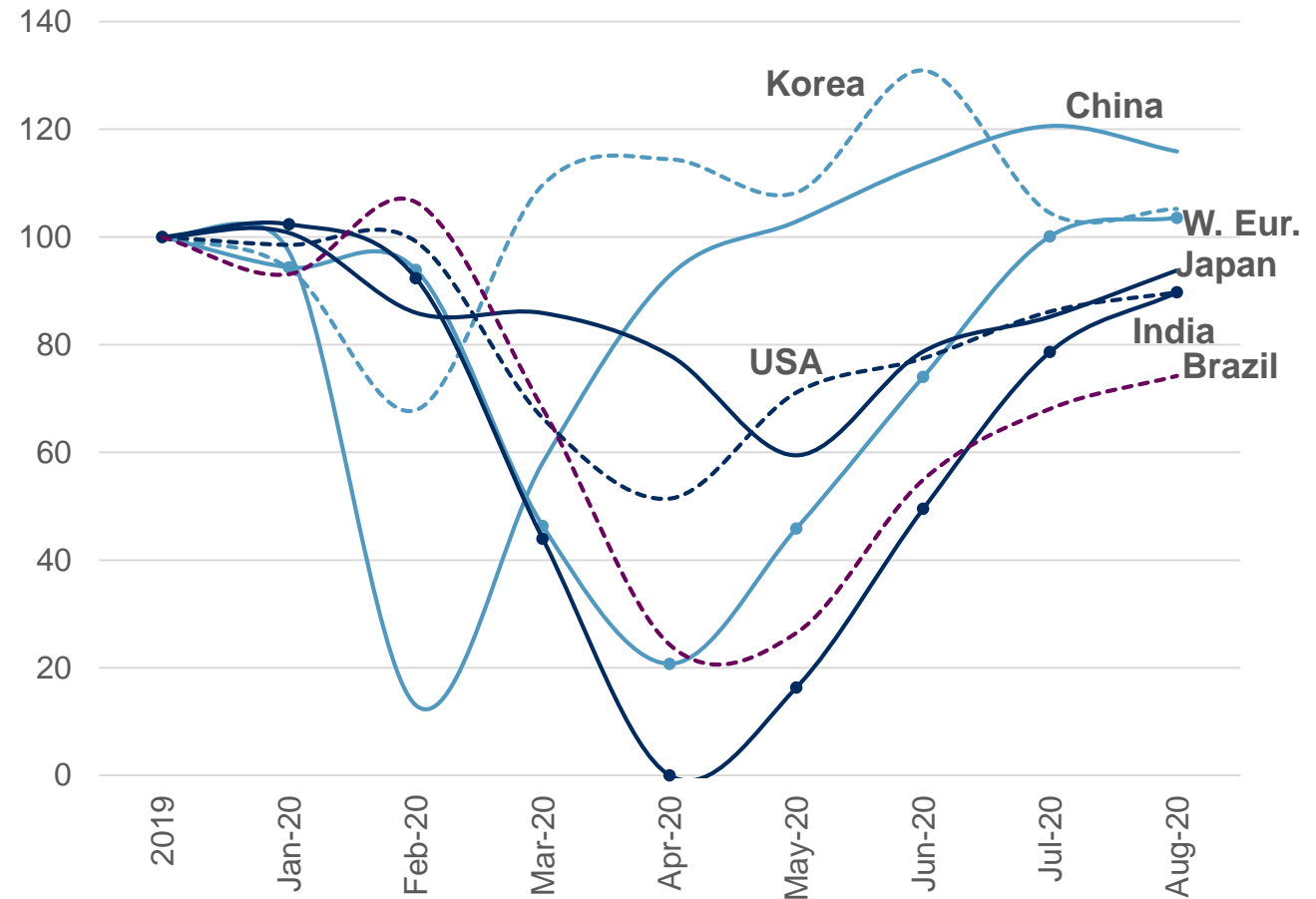


Wide range of recoveries in Light Vehicle markets



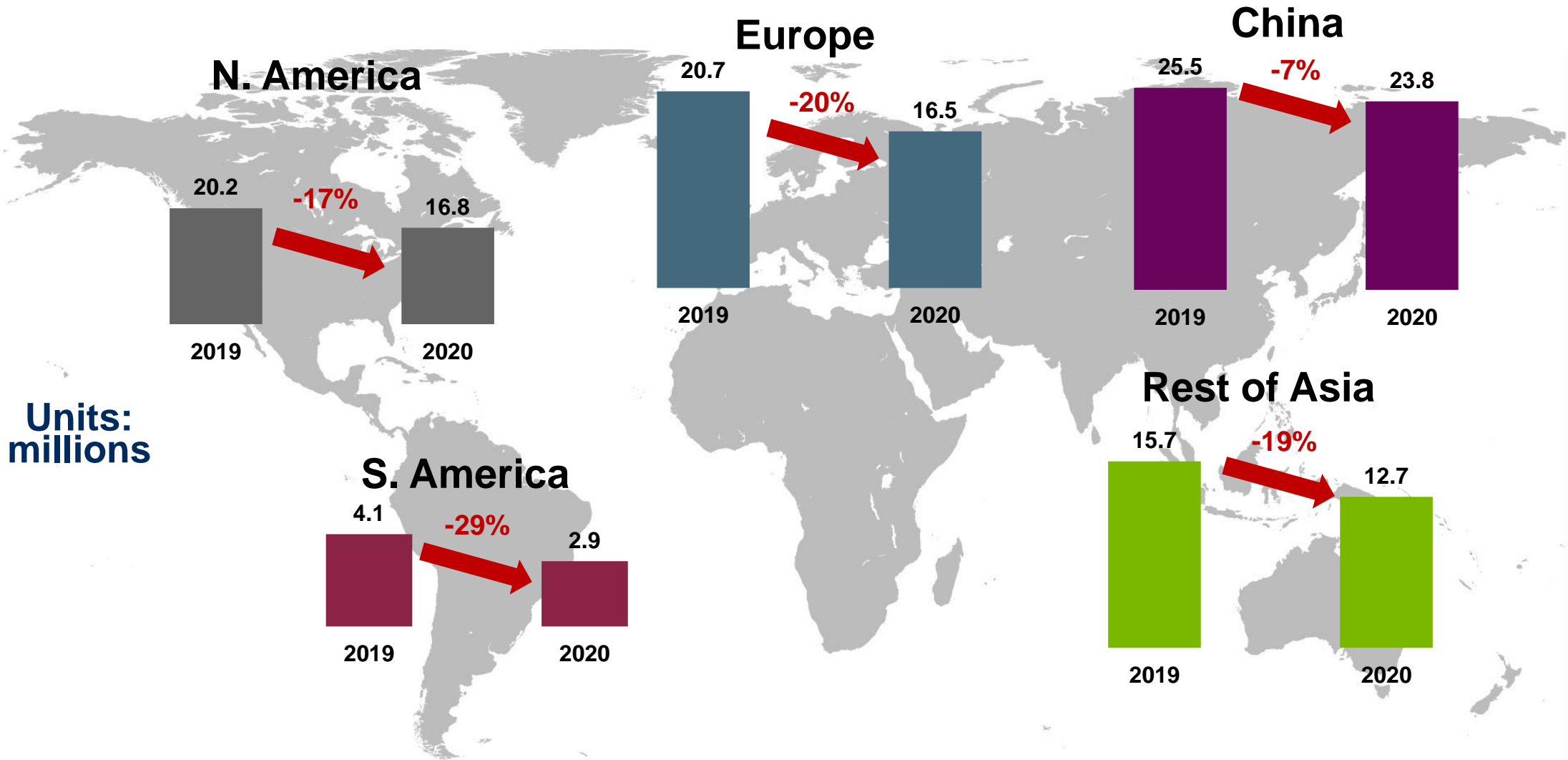
- **Normalised or better.** China better than 2019 since May. Korea cooling but solid. West European markets produced a 'normal' market level in July, though it is being supported by moderately strong incentives.
- **Tempered rebound.** The US passing through renewed COVID surge. Japan has passed through a second outbreak (low level). India gaining.
- **Slow recovery.** Brazil slower to recover, but now gaining traction though recent high case numbers have hindered recovery.

LV SAAR by country/region, 2019 =100



LV demand in all regions see major contraction

World – 76.3mn, down 16% from 2019





Sustaining the global rebound will be challenging

- **Temporary factors that have boosted the rebound are going to weaken or disappear.**
- **Pent-up demand.** During lockdown and the period of suppressed sales, pent-up demand has built up and is now being released – some of this will likely soon be exhausted. (Note: buying a car to avoid COVID risk is also probably still relevant and may not disappear.)
- **Inventory correction.** Some sales measures, e.g. wholesales data used in some countries, are benefitting from post-lockdown inventory replenishment – this source of demand will also dry up when inventories are normalized.
- **Incentives.** Government incentives are in use in a number of markets, especially in Europe. They have been less prevalent elsewhere. When the incentives expire, or funding is used up, demand will weaken.
- **Fiscal rescue.** Direct economic support from governments will have a limited duration. When job and business support schemes end, or are tapered, a renewed macroeconomic slump could emerge, damaging underlying vehicle demand.
- **Second wave.** Case numbers are rising in a number of countries that may be poised to trigger new social distancing controls.

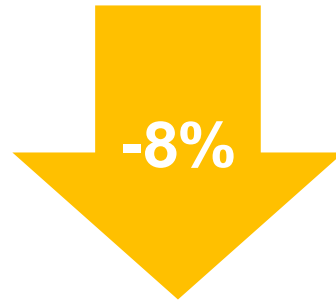
BEV sales are outperforming total Light Vehicles



Global LV Sales



Global LV sales %
change Aug-20 YTD



Global BEV sales %
change Aug-20 YTD

US LV Sales

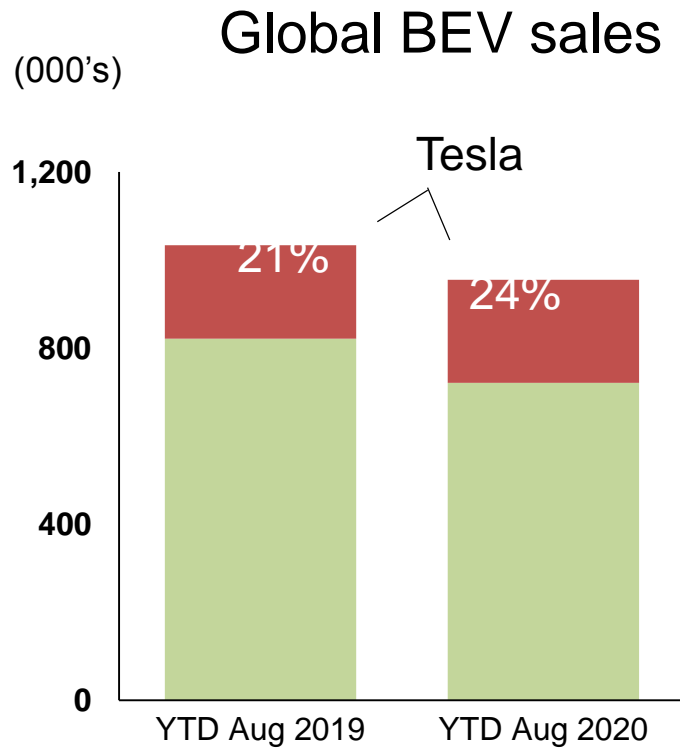


US LV sales %
change Aug-20 YTD

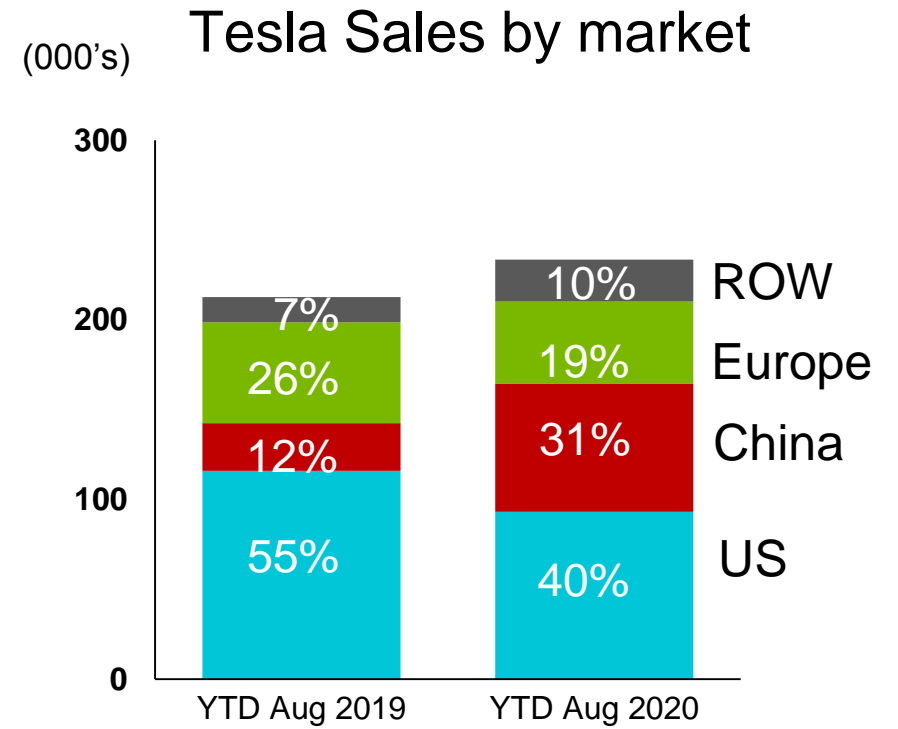


US BEV sales %
change Aug-20 YTD

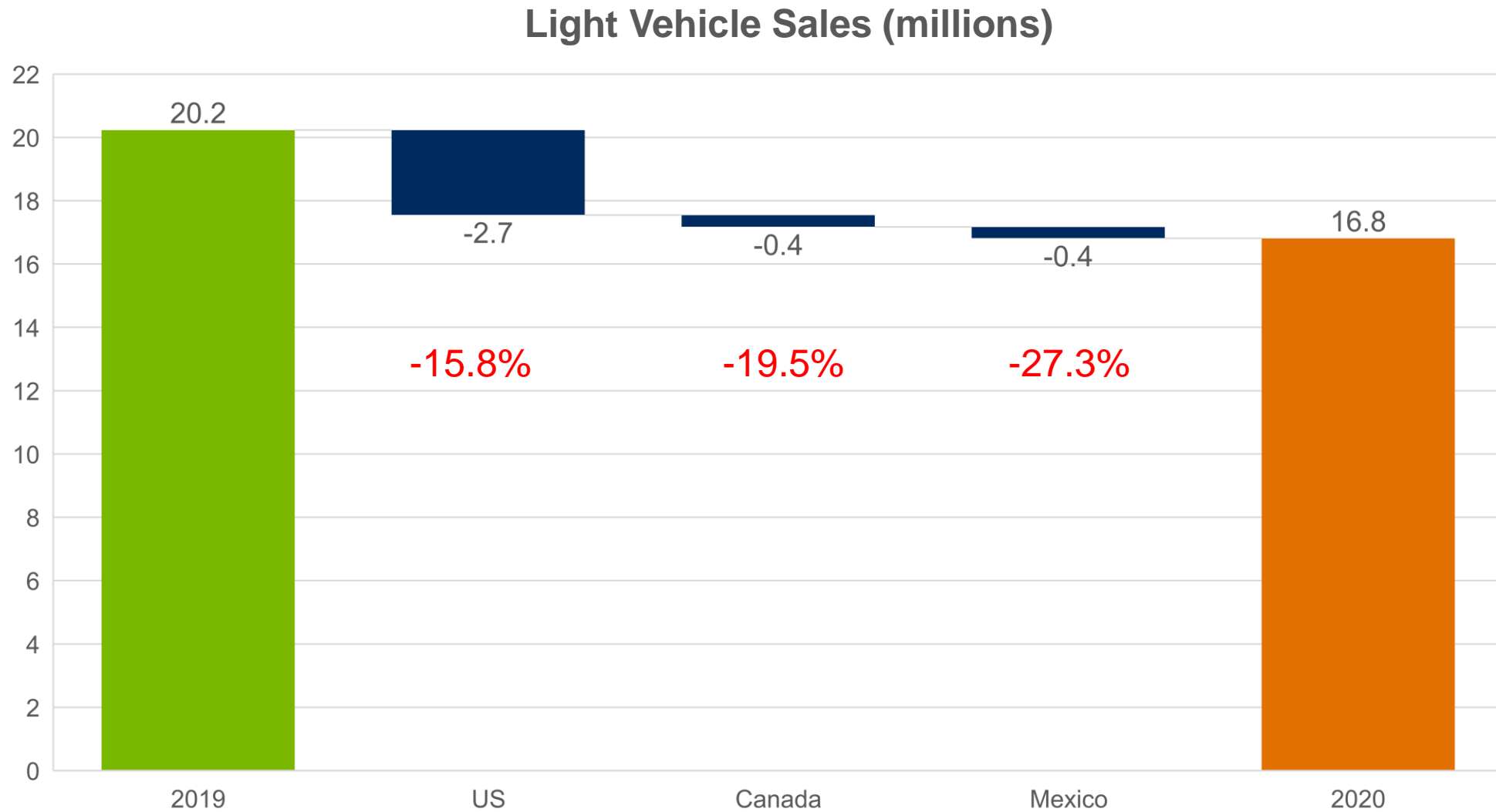
Global BEV sales – Tesla impact



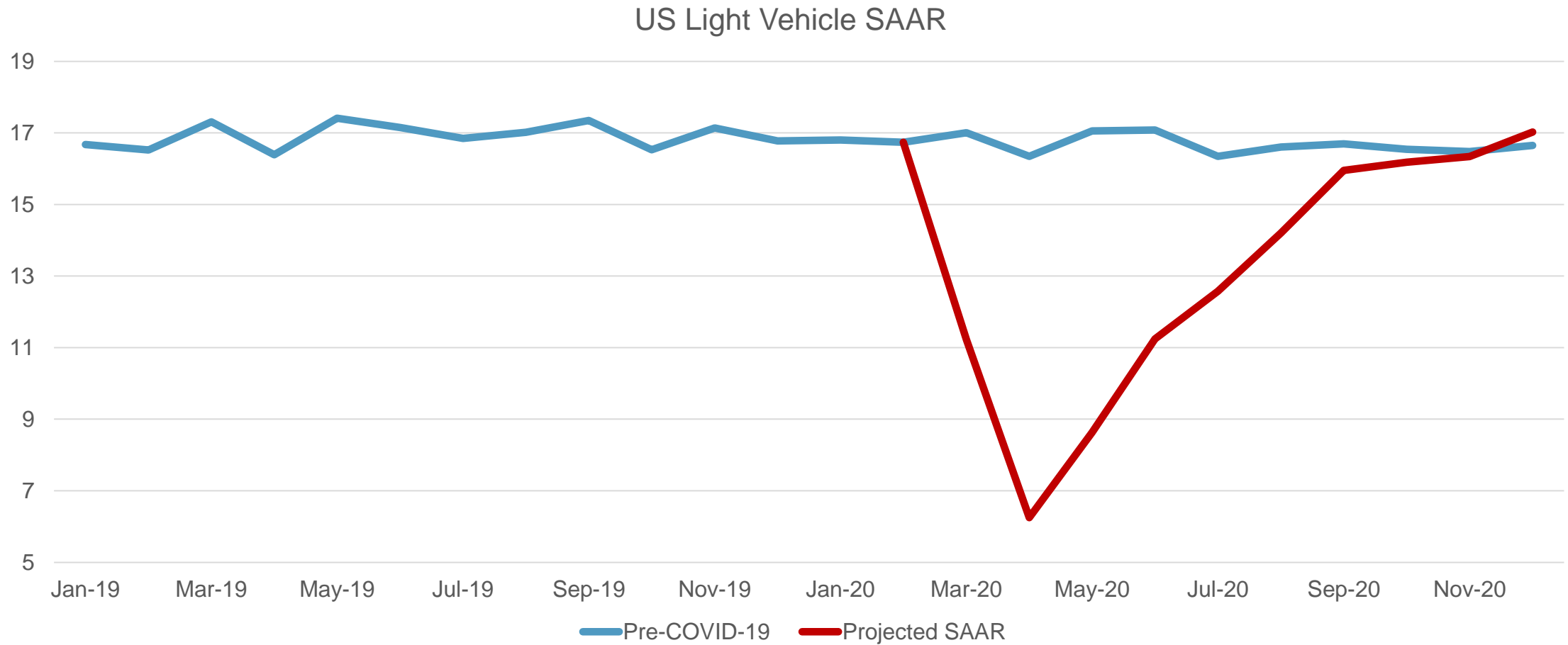
ROW – 10%
Europe – 34%
China 44%
US – 13%



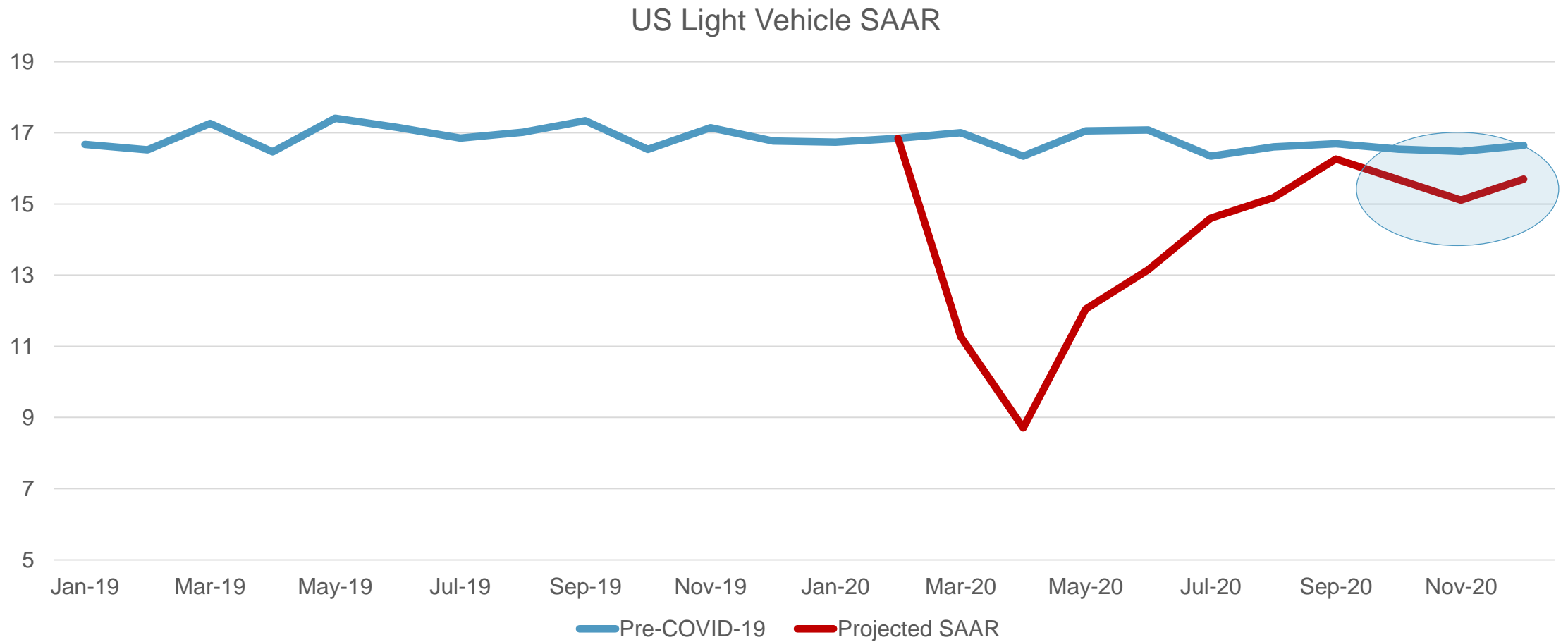
North America near-term sales forecast



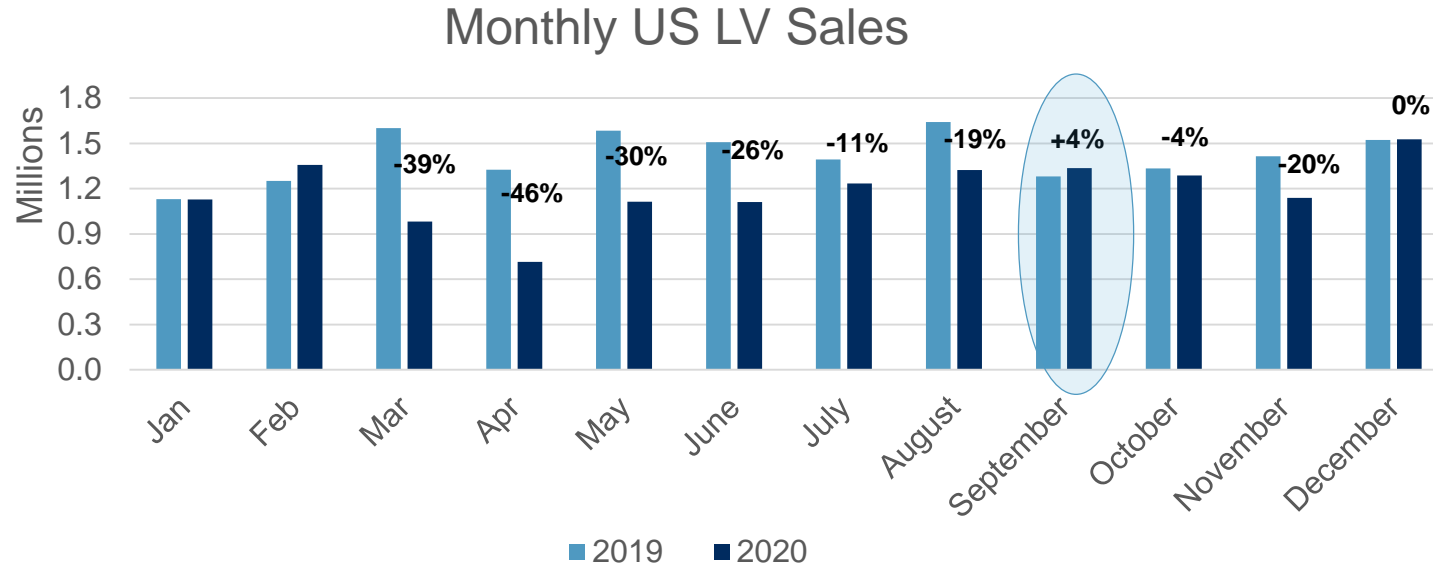
US sales pattern as of end of March 2020



Current US sales pattern

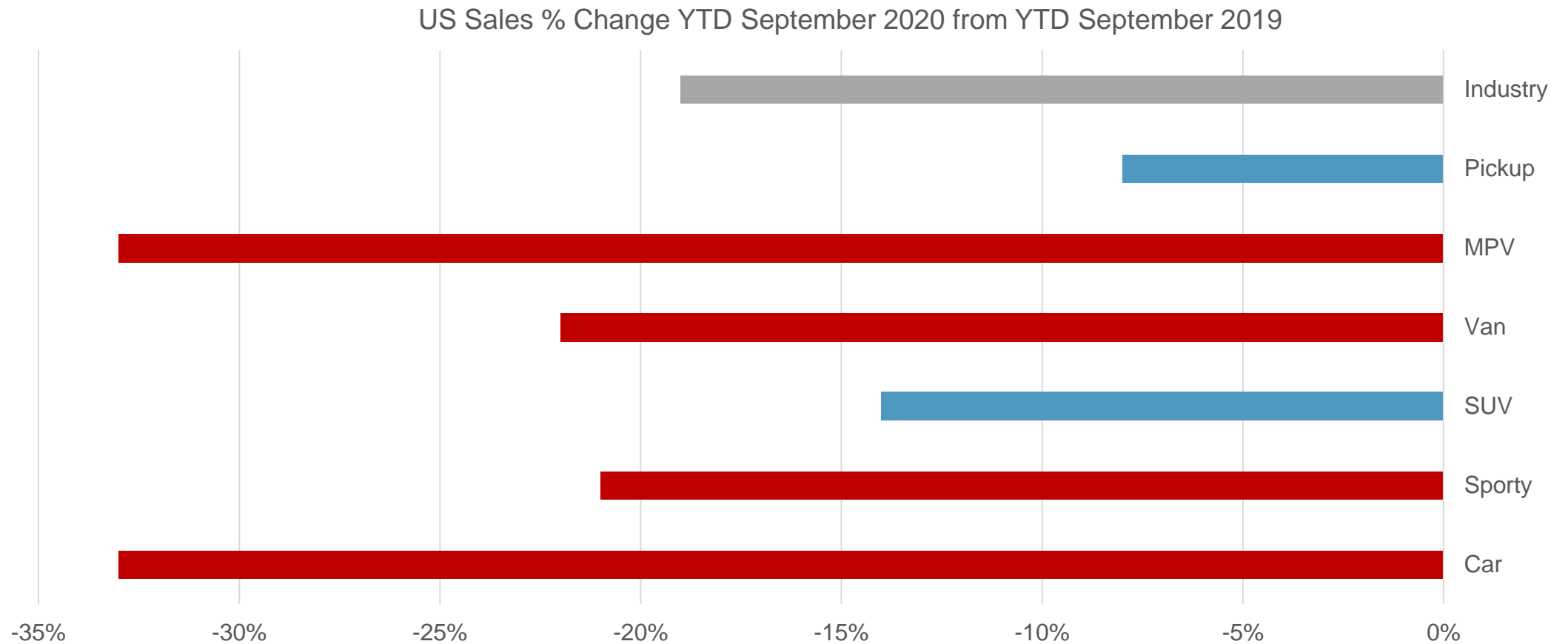


2020 US LV sales metrics – is the worst is past us?

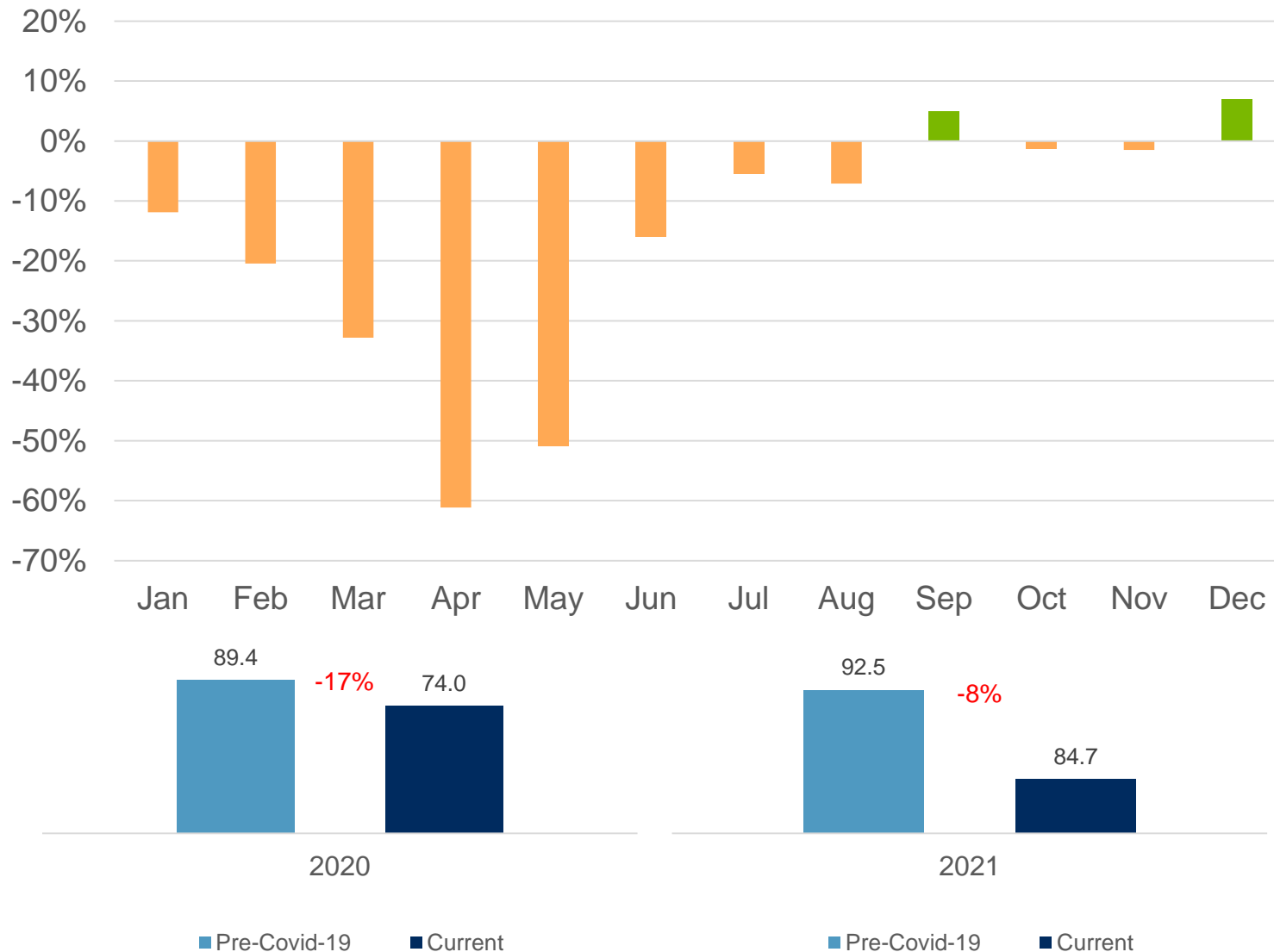


- Gradual improvement in performance expected with YTD off 19%.
- Incentive drop below \$4k for first time since June of 2019 – down 7% from Sep-19.
- CFTP at all time high again! Up 7% above year-ago.
- Leasing is off a bit but remains high at 28%. Long loans are up (>72-month is 41% of transactions).

Not all sales equally impacted - Trucks have held up well!

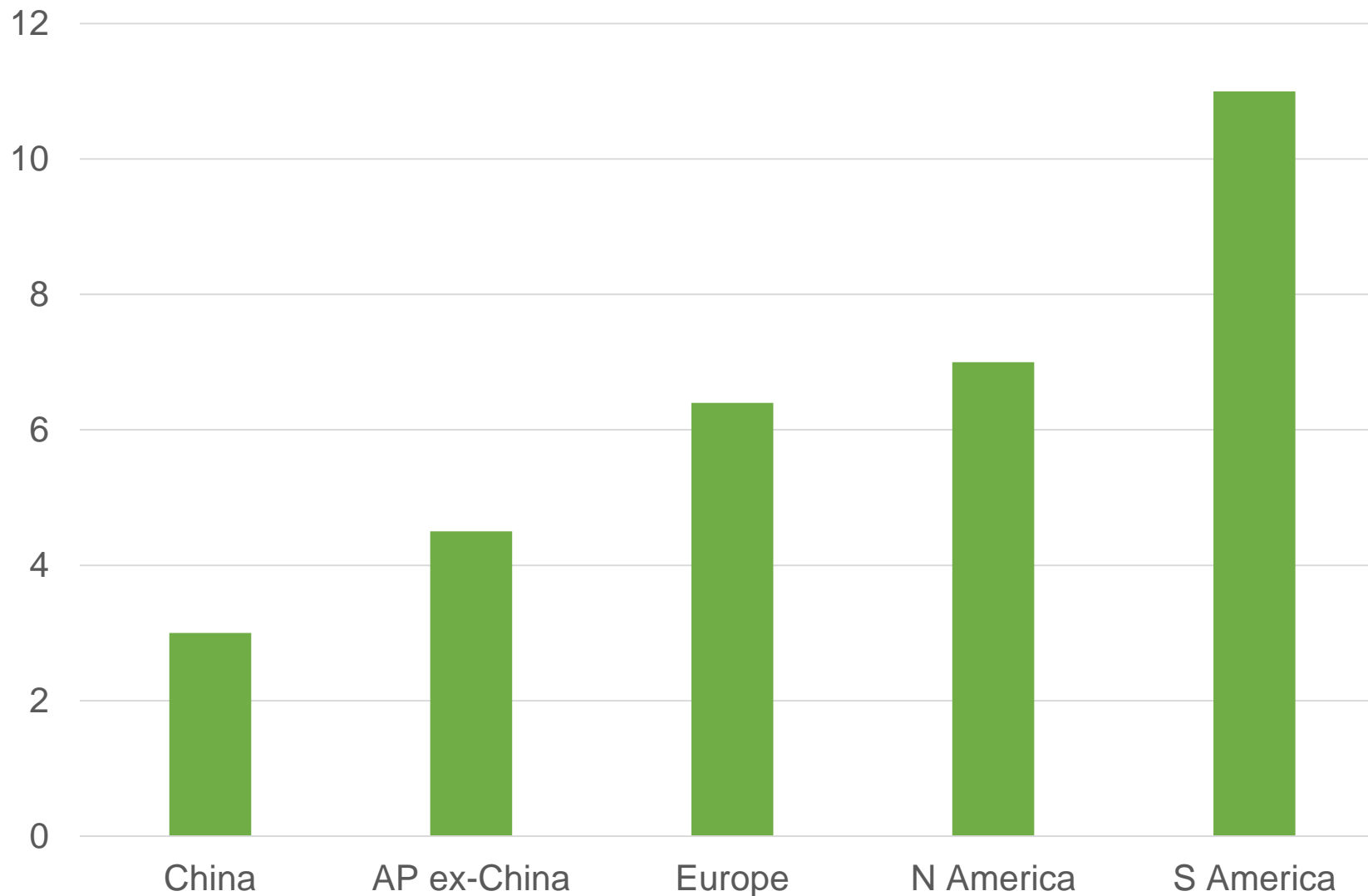


2020 Global LV production pattern

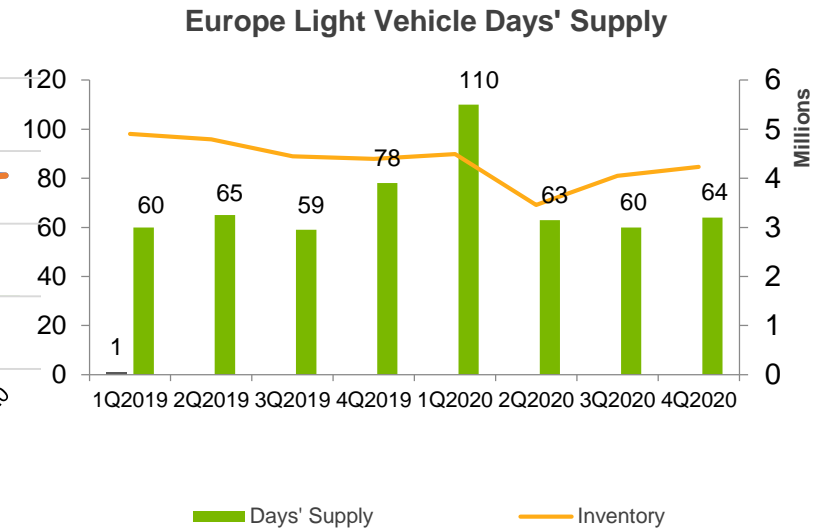
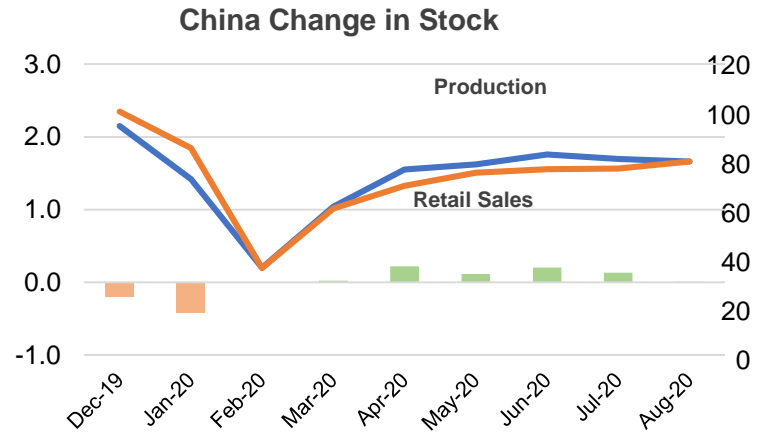
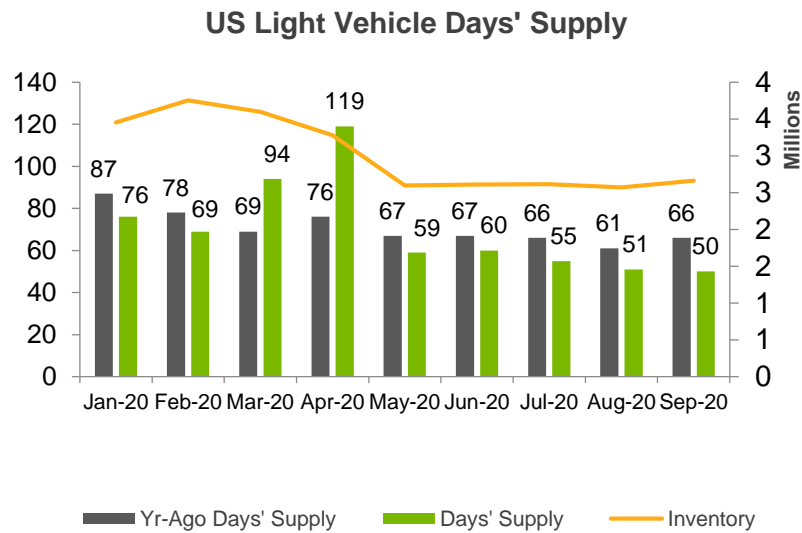


- Marked improvement in performance with YTD August off -26%.
- Sep-Dec now expected up 2% from same period in 2019, as inventory rebuild ramps up.
- 2020 expected down -17% from Pre-Covid-19, improvement of 3.1mn units from May.
- 2021 expected down -8% from Pre-Covid-19 forecast, up 2.5mn.

Average plant shutdown in weeks

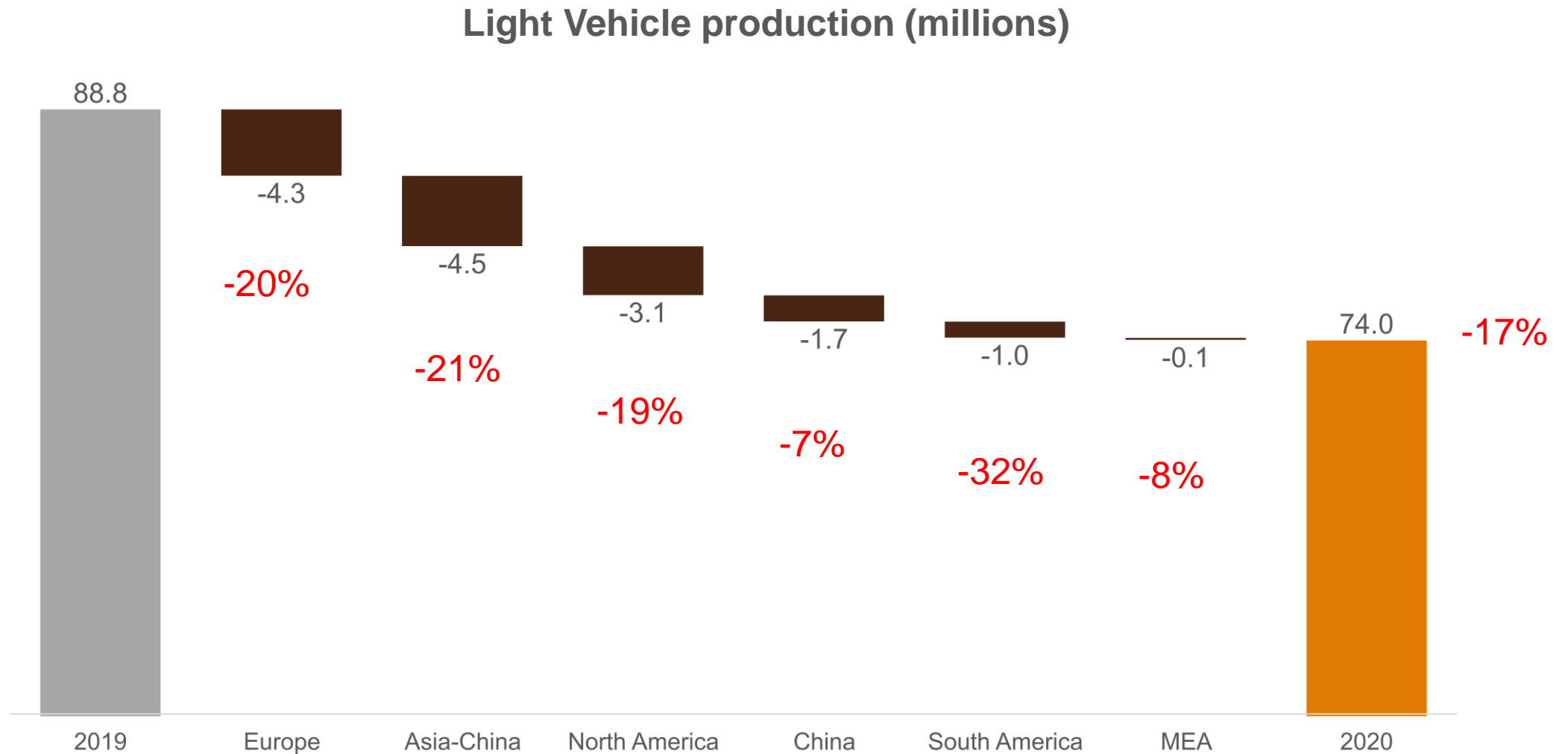


Inventory situation differs across markets

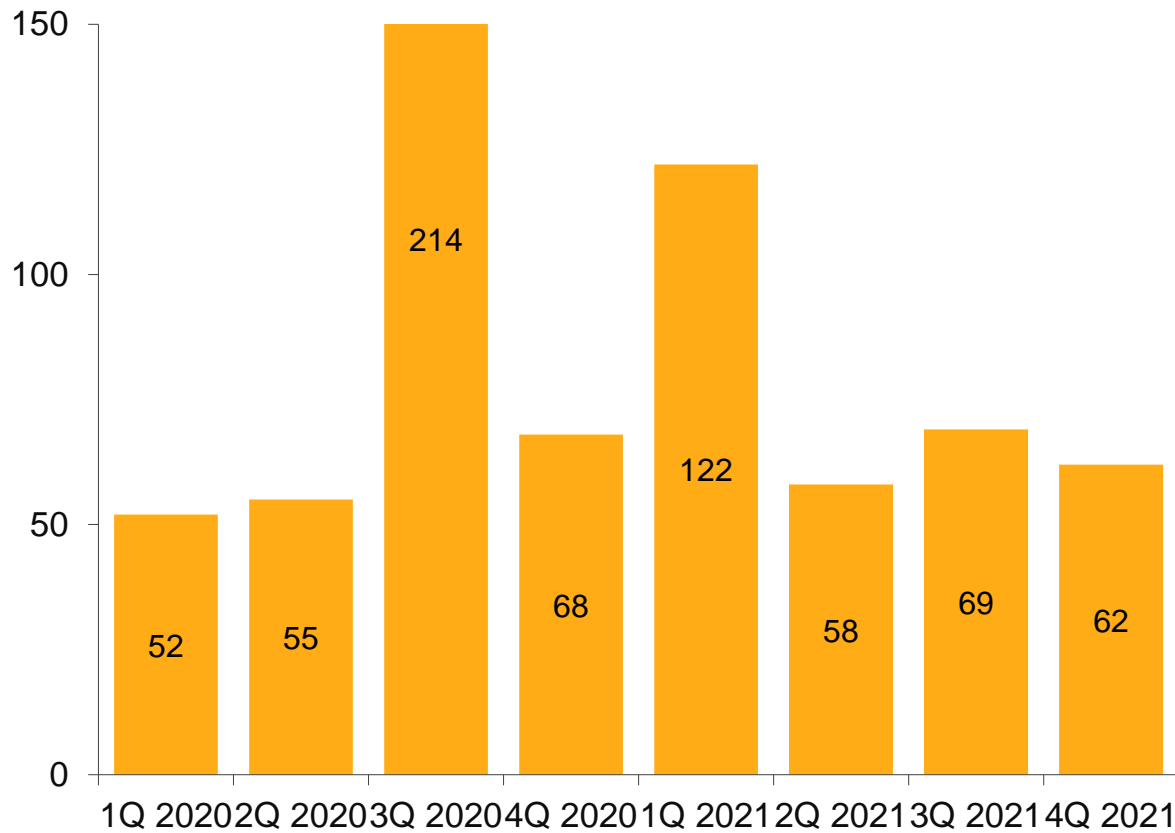


- US days' supply is holding in 50-60-day range while inventory remains at historic lows. May not see normal inventory levels until mid-2021.
- China was destocking heading into the outbreak. Given rapid rebound and restart in production, inventory has begun building again relative to retail demand.
- Europe saw a similar supply spike but has since balanced on stronger demand and production that appears to be keeping pace.

Global production decline by major market



Global launch activity impacted



Ramping up...



Tesla Model Y



Hyundai Tucson



Audi A3

Upcoming...



Ford Mustang Mach E



Ford F-150



Nissan Qashqai



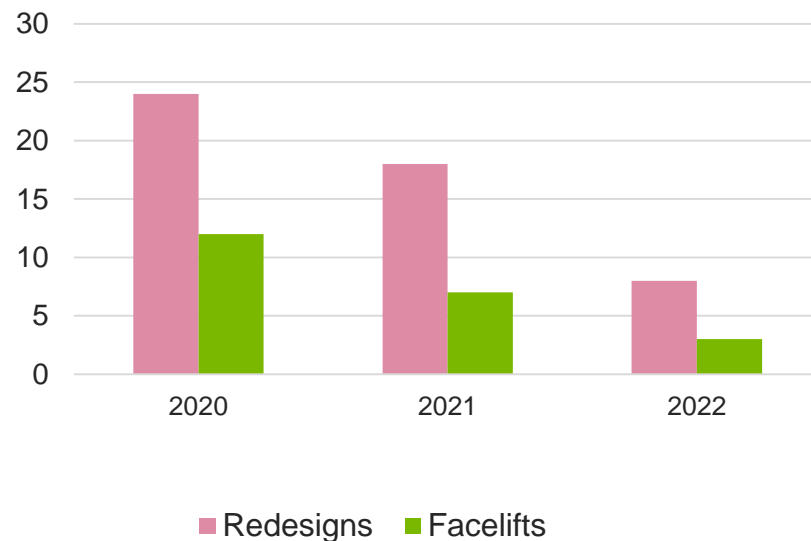
Honda CR-V

North America launch delay analysis

2020 Launches

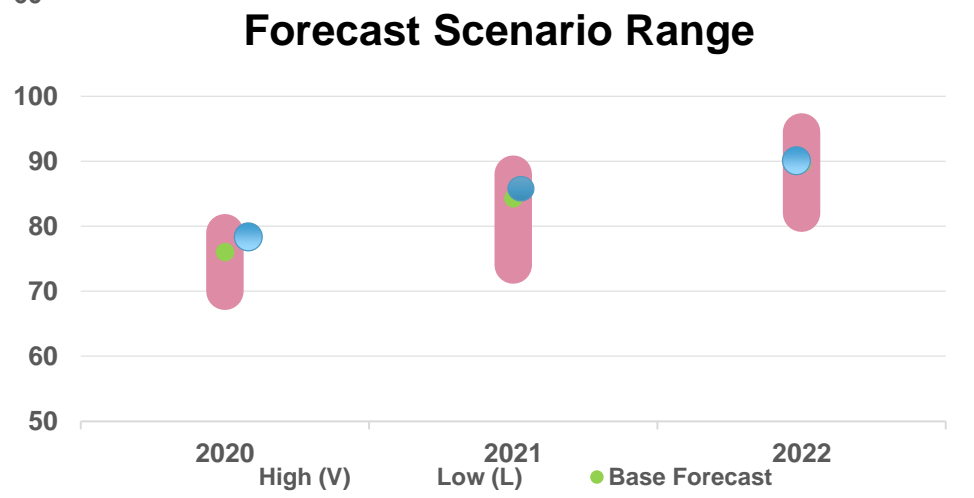
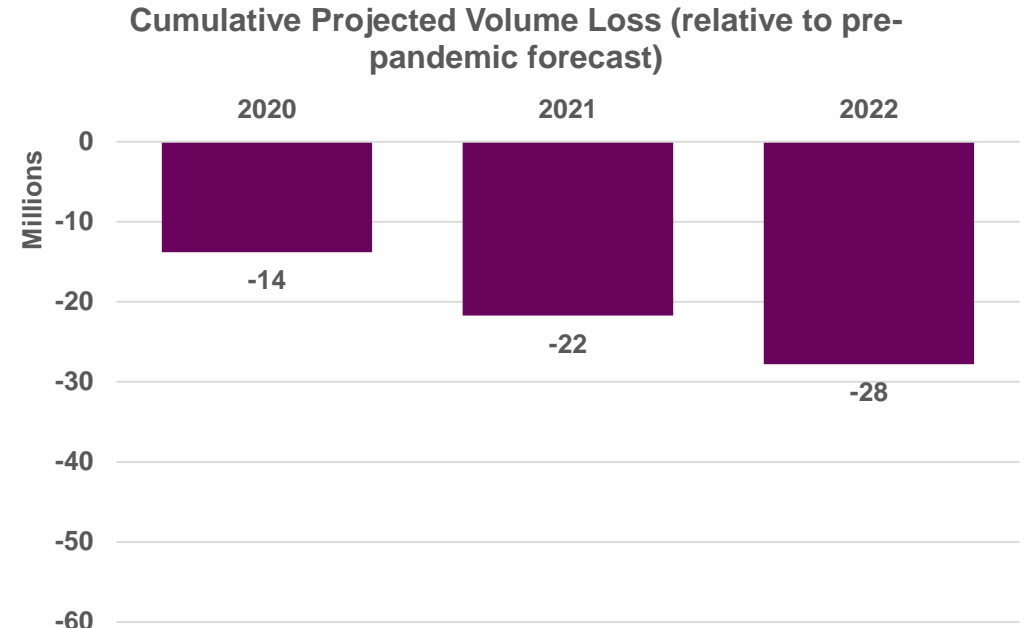
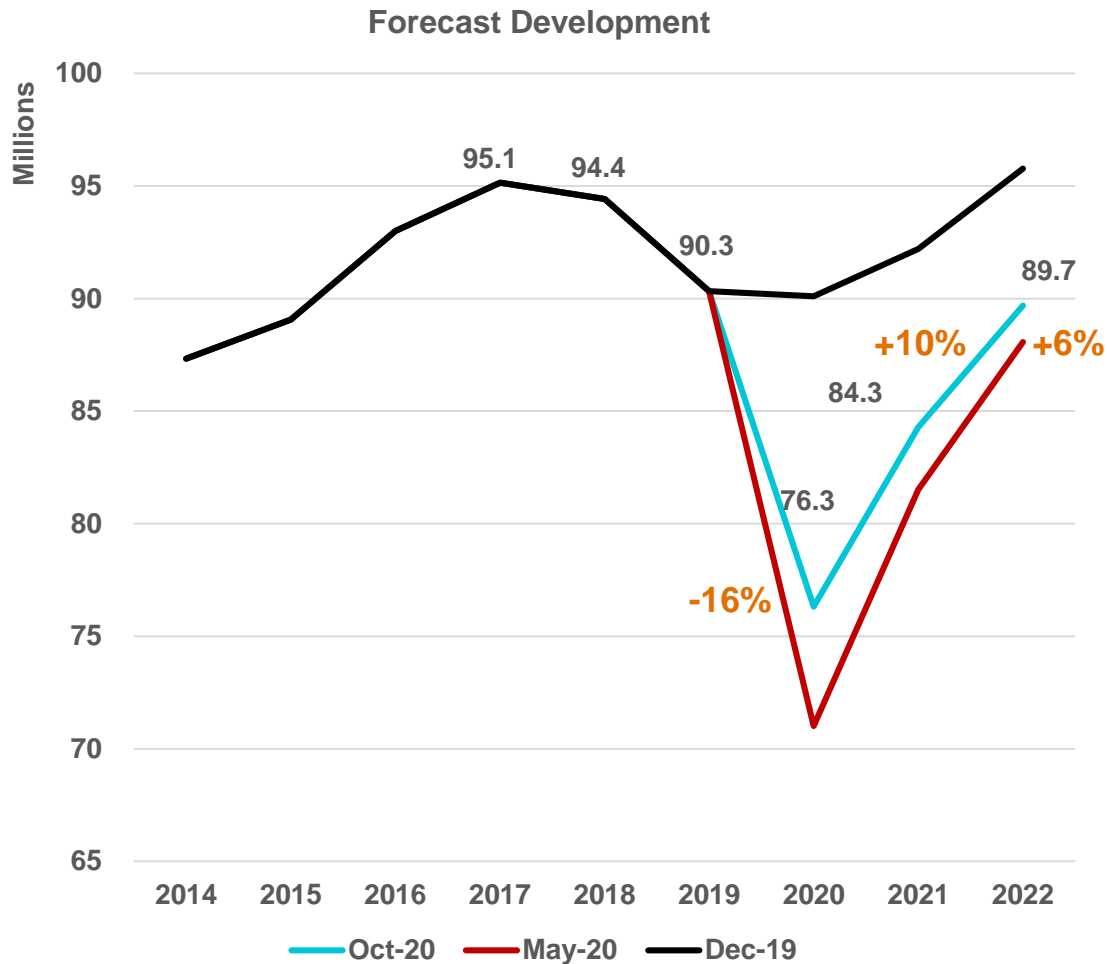
Launches	Action
38	Planned 2020 NA launches
5	Launched by ramp-up delayed
12	SOP delayed within 2020
12	SOP delayed into 2021 or beyond
9	SOP not yet delayed

Delay Activity by Year



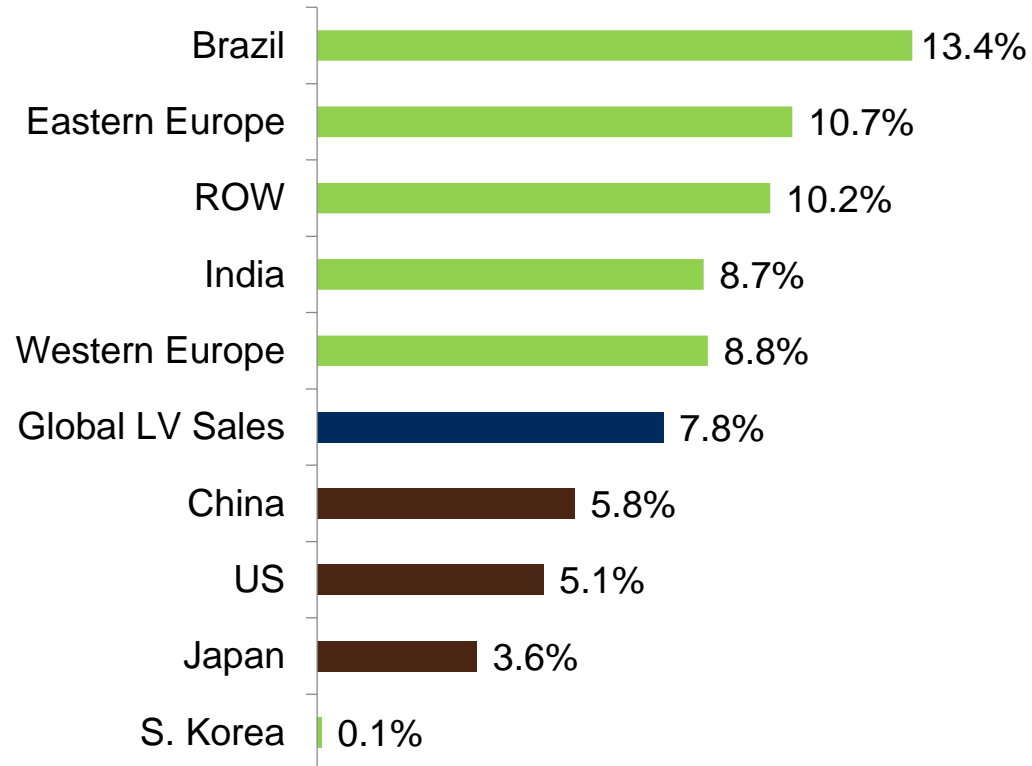
- Nearly 80% of planned NA launches impacted.
- Average delay in region increased to 5.5 months, affecting 25 assembly lines.
- OEMs are prioritizing new programs based on importance.
- Facelift activity further down the priority list.
- 5 redesigns/launches were cancelled and 3 were pushed outside of our forecast horizon.

Change to global Light Vehicle sales forecasts



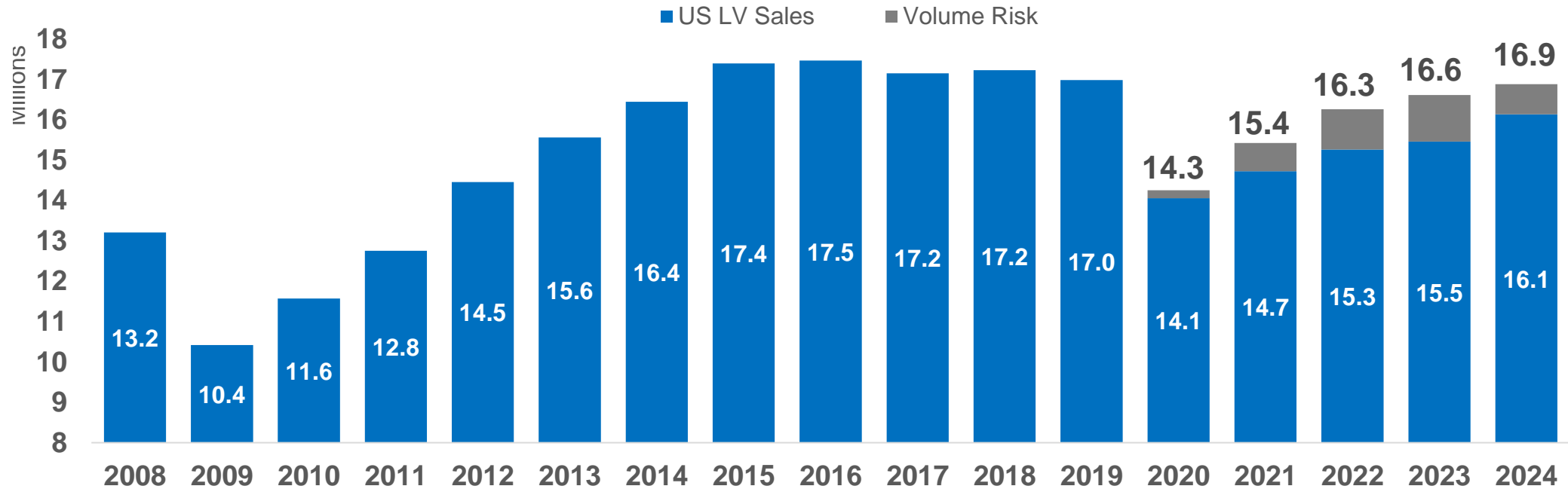
Key markets medium-term recovery path

CAGR Global Sales '20-'23



- Global CAGR at nearly 8% 2020-2023, with most emerging markets outperforming mature.
- China and South Korea are in a much stronger position in 2020 so recovery is less than other markets.
- Growth into the longer term is still dependent on stability in mature markets and further growth in newer markets.

US Sales recovery pattern – uncertainty still high



- Recovery hinges on economy bounce back and continued improvement employment. Second stimulus is key to keep on track heading into 2021 but looks like post-election.
- US trade policy, specifically the US-China trade progress is a potential headwind.
- Election is a wildcard to recovery pace and level.

US Segment Shift to SUVs continue – 2020-2024 CAGR



SUV reign continues throughout forecast



Voyager addition + new EV MPVs help, but...



Car segment under pressure but EVs slow share decline



Premium EVs/Corvette drive **Sporty** growth

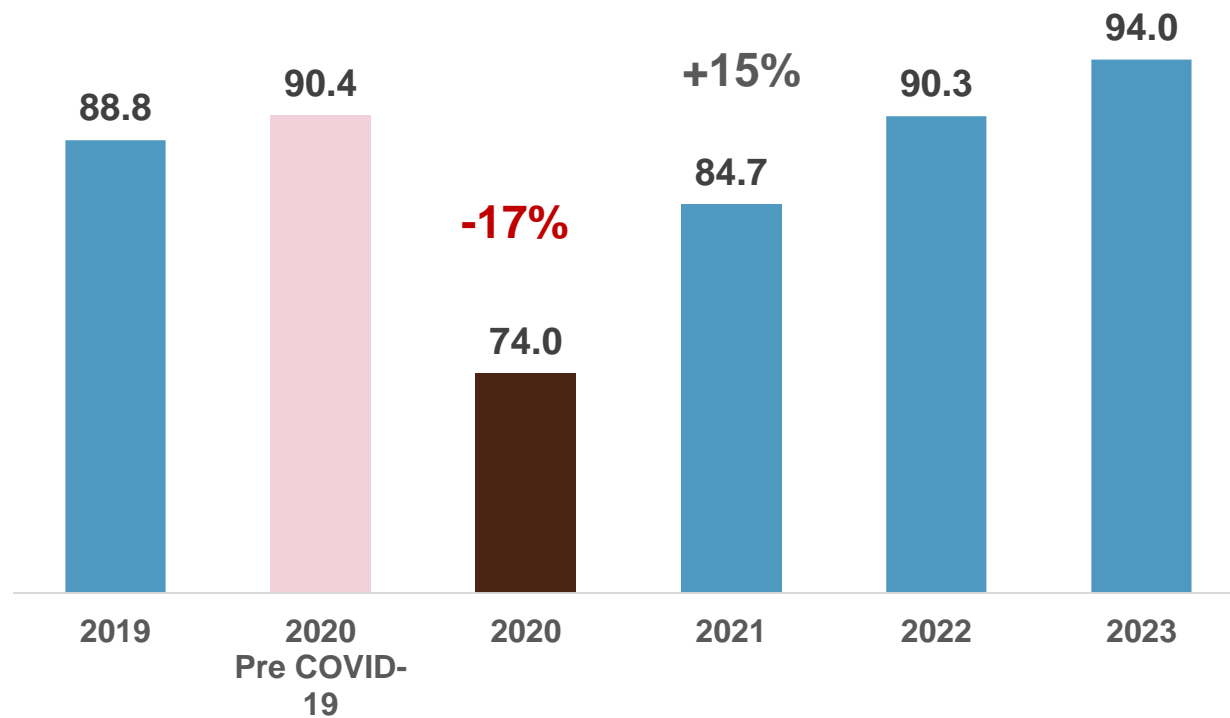


New entries in Midsize and Large driving slight **truck** growth



Total **Premium** gains more ground after SUV and EV expansion

Current global production baseline forecast

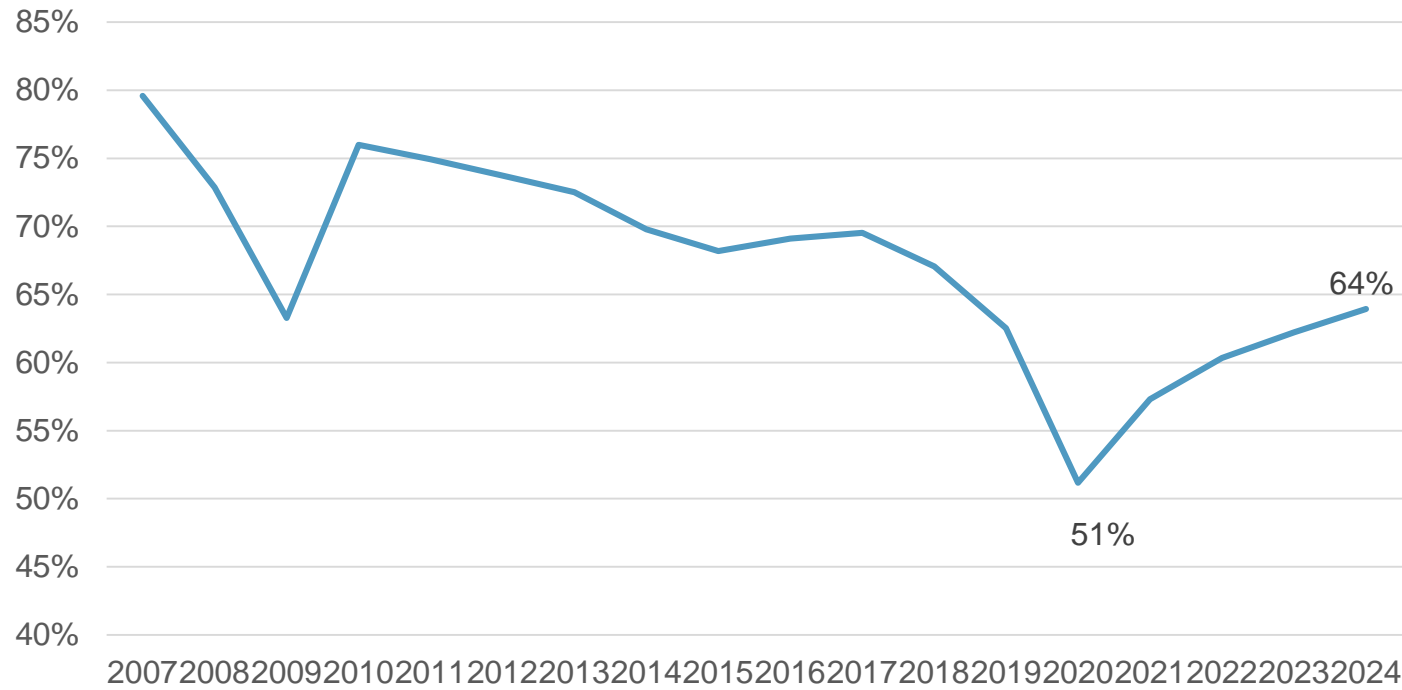


- Production expected down by 17% with rebuilding inventory to meet stronger demand.
- Risks include a second wave and short-term capacity constraints.
- Pre-COVID-19 expected by 2022 as industry builds inventory hedge

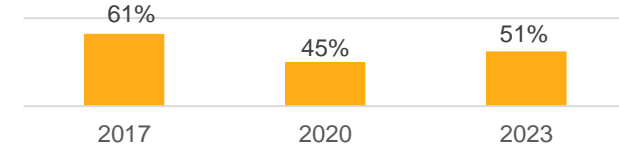
Utilization is at lowest level ever in 2020!



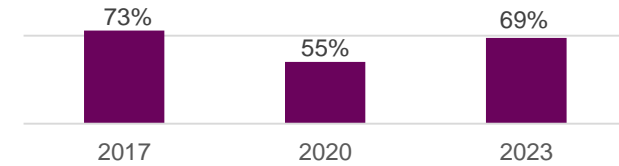
Global Utilization



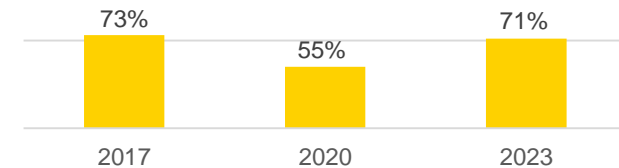
China



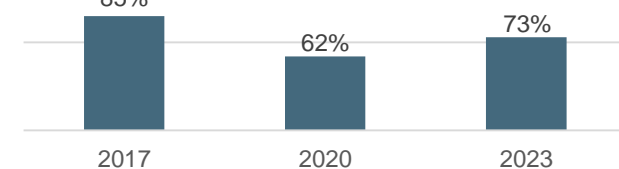
Asia-China



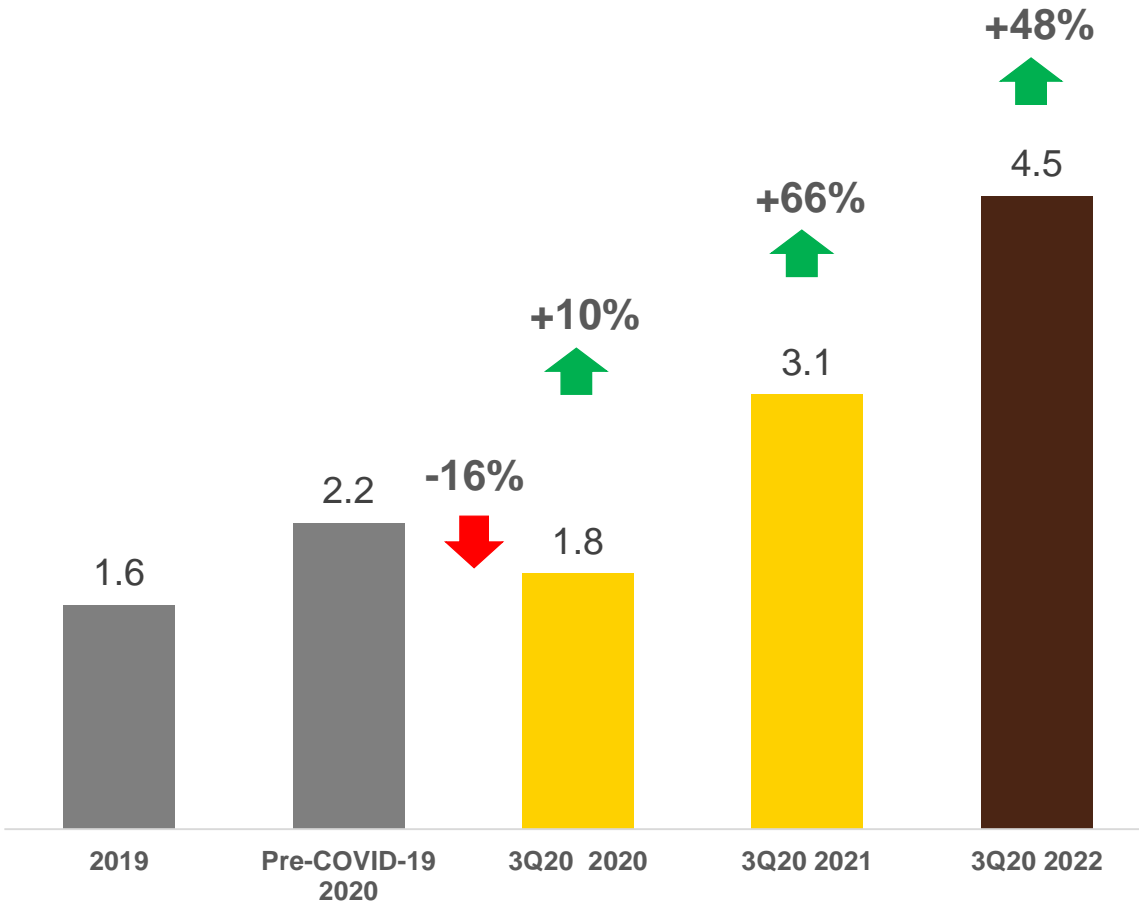
Europe



North Am

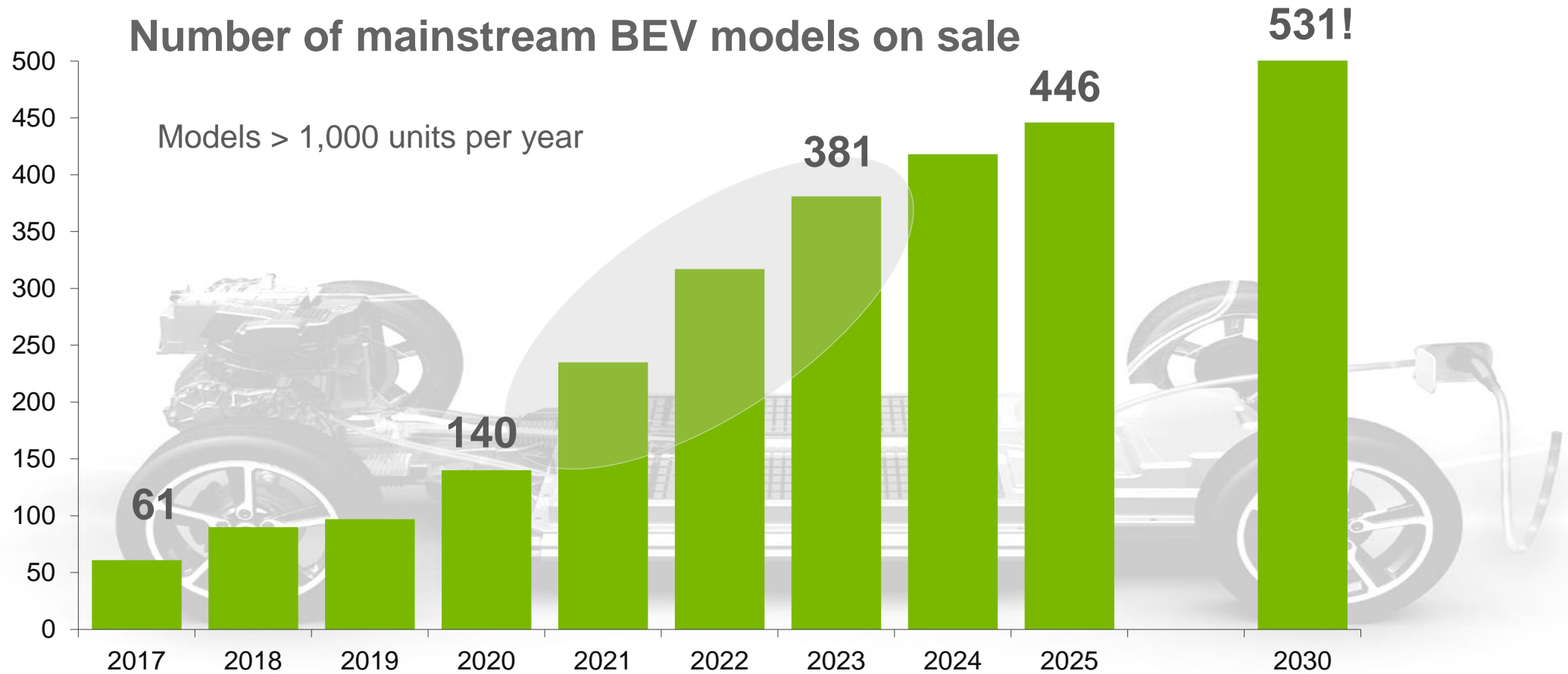


Global BEV growth marches on!

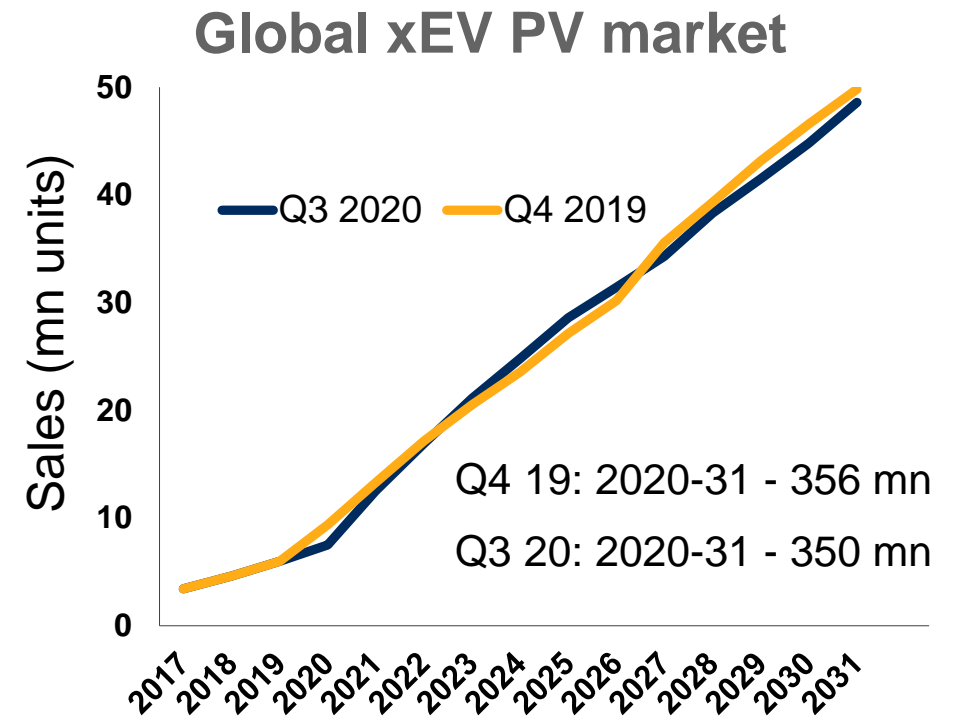
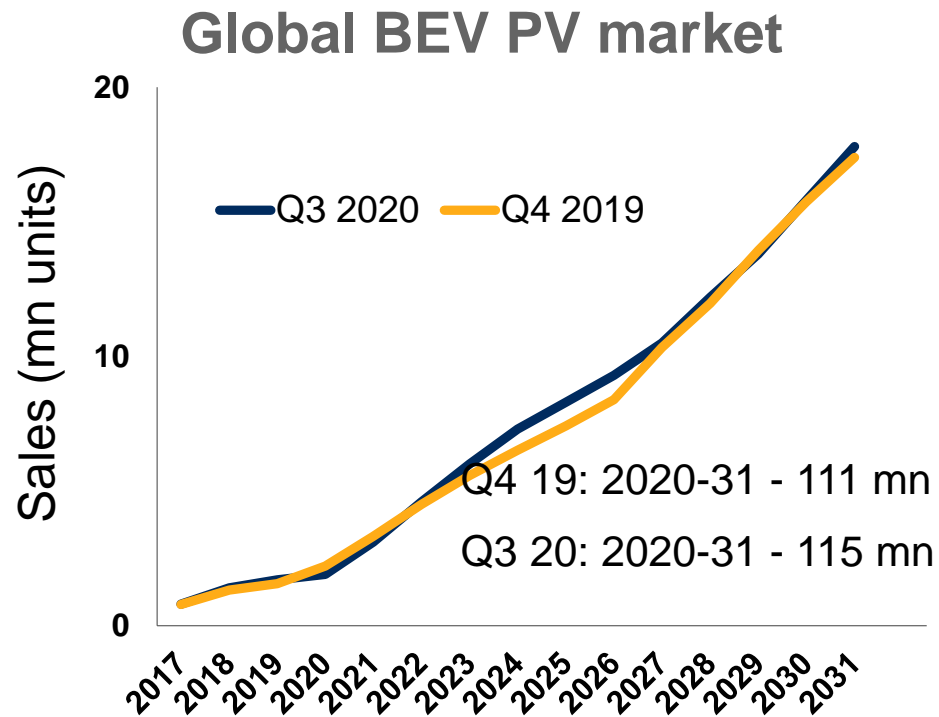


- COVID-19 hits BEVs but they are still expected to grow in 2020.
- China rebound and Europe regulations are driving growth.
- Share of industry could rise faster given Tesla factor and new start-ups.
- By 2030, we expect volume to be nearly 15% LV volume. US BEVs about 9% of US LVs.

Global BEV model onslaught

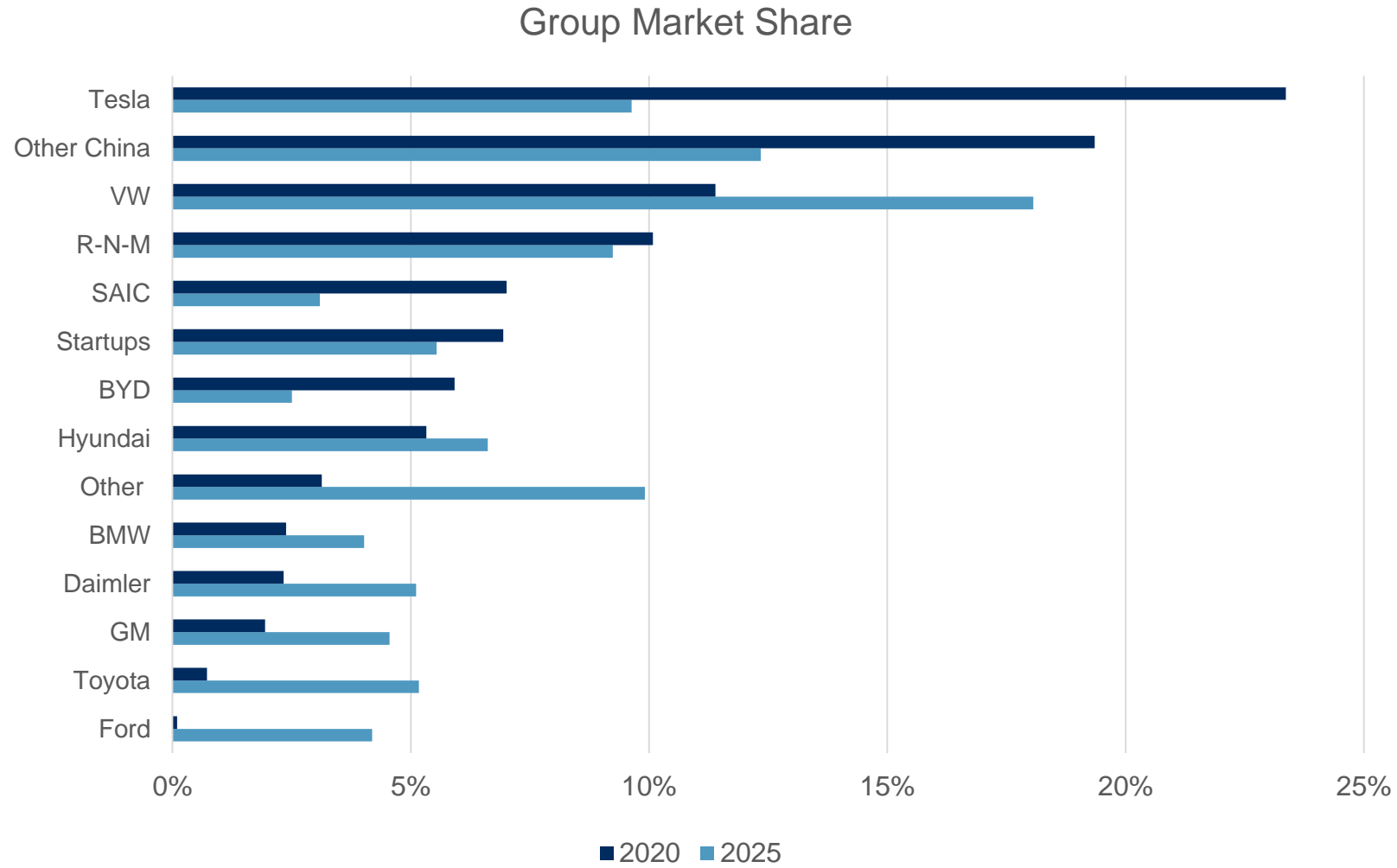


COVID-19 doesn't Impact the Long-Term Forecast



- There may be a net positive influence in BEV demand resulting from a reluctance to revert to the use of public transport (especially in China).
- COVID-19 and the resulting improvement in air quality *may* act as a focal point for public opinion to shift in favour of faster elimination of fossil fuel emissions.

Changing BEV Landscape





Final Thoughts



For experts⁷
by experts

jschuster@lmc-auto.com

lmc-auto.com

Oxford	+44 1865 791737
Detroit	+1 248 817-2100
Bangkok	+662 264 2050
Shanghai	+86 21 5283 3526

Thank you

Outlook for Credit Availability: Trends in U.S. Auto Financing & Auto-Backed Securitizations



Dio Mejia

Financial Institutions Ratings
S&P Global Ratings



Amy Martin

Senior Director, Structured Finance
S&P Global Ratings

Impact of COVID-19 On Auto-Related ABS

Auto Loan ABS

- Record high level of extensions is temporarily suppressing DQs and losses
- S&P Global Ratings increased its base case loss assumptions
- 33 Subprime NonIG classes put on CW-Neg, 8 downgraded
- Credit enhancement has increased for new deals
- Issuance is down, but market remains open and healthy unlike during the GFC

Auto Lease

- Residual values are holding up with most deals reporting residual gains
- S&P made no changes to its loss assumptions
- The downgrade of one auto maker's issuer credit rating (ICR) below IG led to one lease ABS downgrade
- Issuance is expected to be down slightly from last year

Dealer Floorplan (DFP)

- Initially payment rates plummeted, but now are at pre-pandemic levels or higher
- Some issuers modified their payment rate triggers
- S&P's rating assumptions are tied to the mfrs' ICRs. The downgrade of one automaker led to six DFP downgrades
- With reduced auto sales, issuance is expected to decline

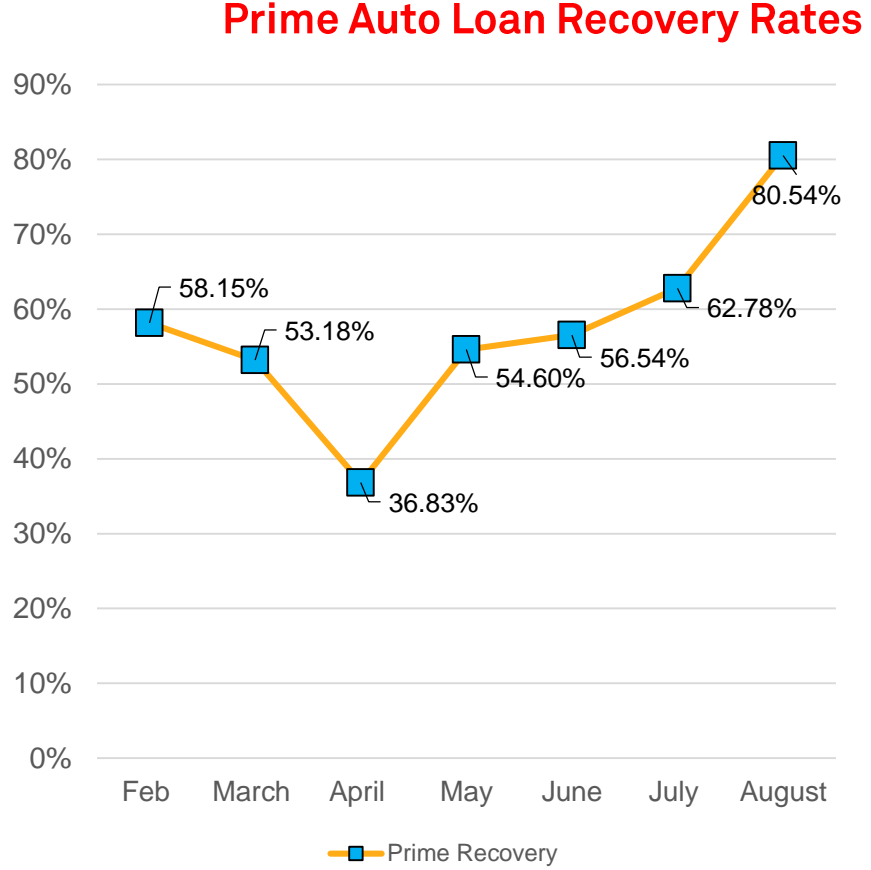
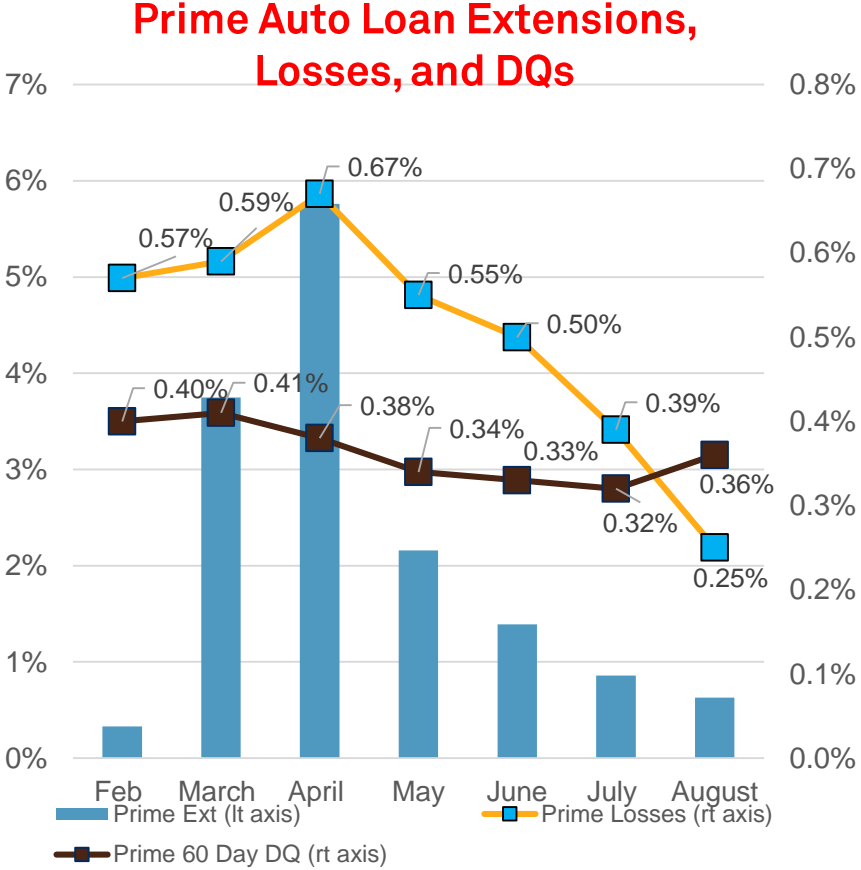
U.S. Auto ABS – Rating Actions

Cumulative Number Of Tranches Affected By COVID-19(i) through Oct. 8

	Auto Loan	Auto Lease	Dealer Floorplan
Number of outstanding ratings	1,321	151	80
Ratings on CreditWatch	24	-	-
Ratings downgraded	8	1	6
Ratings affirmed	4	2	13
Rating actions (% of total)	2.7	2.0	23.8

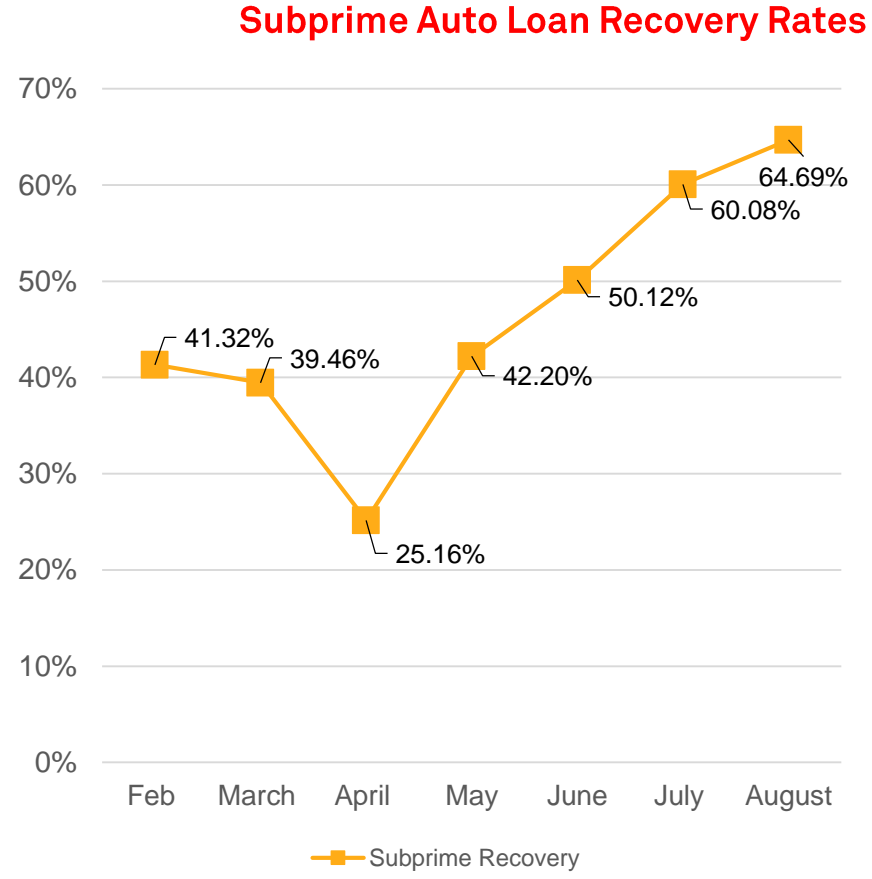
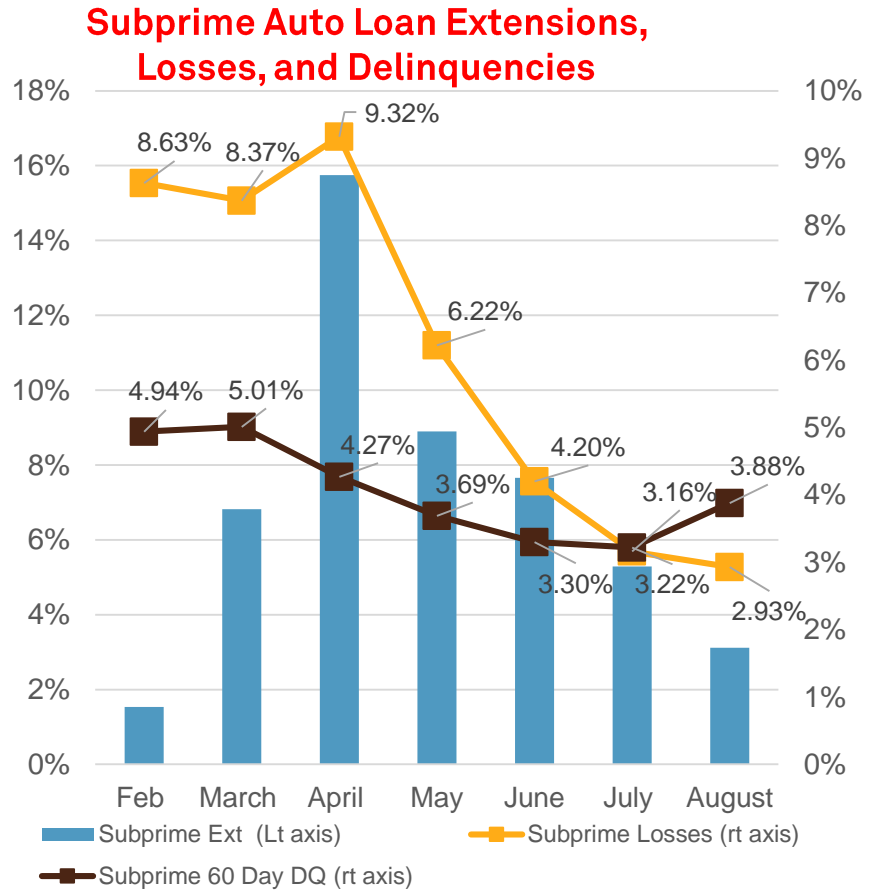
(i)Number of outstanding ratings as of March 1, 2020. Cumulative actions since March 1, 2020. COVID-19 rating activity as of Oct 8, 2020. Source: S&P Global Ratings.

Prime Auto Losses Declining Due to Extensions and High Recoveries



Source: S&P Global Ratings

Subprime Auto Losses Benefiting from Higher Extensions and Recoveries



Source: S&P Global Ratings

Majority of Extended Auto Loans Have Exited Forbearance and Are Performing*

Performance of Previously Extended Auto Loans (since March 2020)

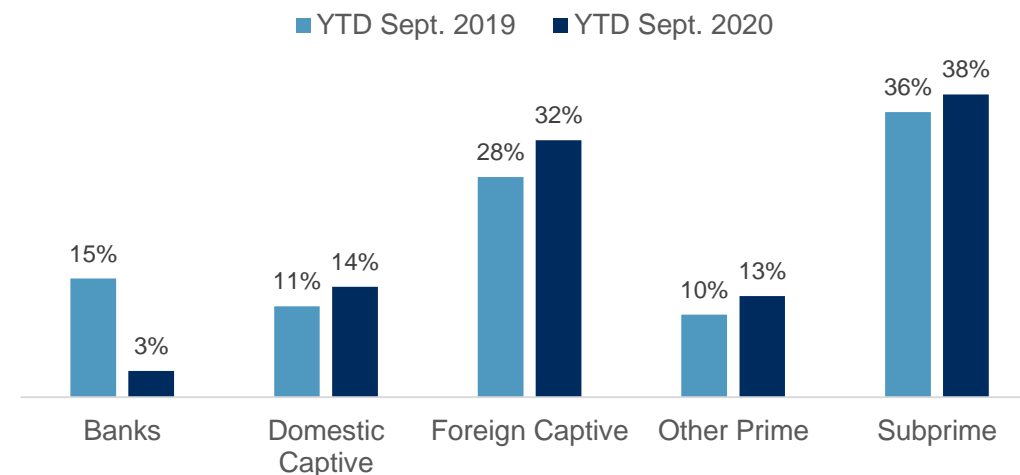
	% of Previously Extended Loans In Repayment	% of Previously Extended Loans Current	% of Previously Extended Loans 60+ Days DQ	% of Previously Extended Loans That Have Made A Full Pymt Or More
Prime	81.8%	81.5%	1.3%	79.7%
Subprime	64.5%	64.2%	3.5%	74.0%

**Based on Reg AB II Loan Level Data Through July 31, 2020. Source: S&P Global Ratings*

Auto Loan ABS Trends And Outlook

- Auto loan ABS volume expected to reach approx. \$70bn this year compared to \$83bn in 2019
- September year-to-date volume at \$59.4bn trailing 2019 by 9%
- Post-COVID-19 transactions generally have more credit enhancement than pre-COVID deals
- Losses are likely to rise, but the magnitude of increase is dependent upon many factors
- Structural protections in auto loan ABS will mitigate higher losses on investment grade bonds
- Subprime Non-IG bonds remain vulnerable to downgrade
- Loan terms have continued to lengthen with 84 month loans becoming more common

Auto ABS Volume Year-to-Date



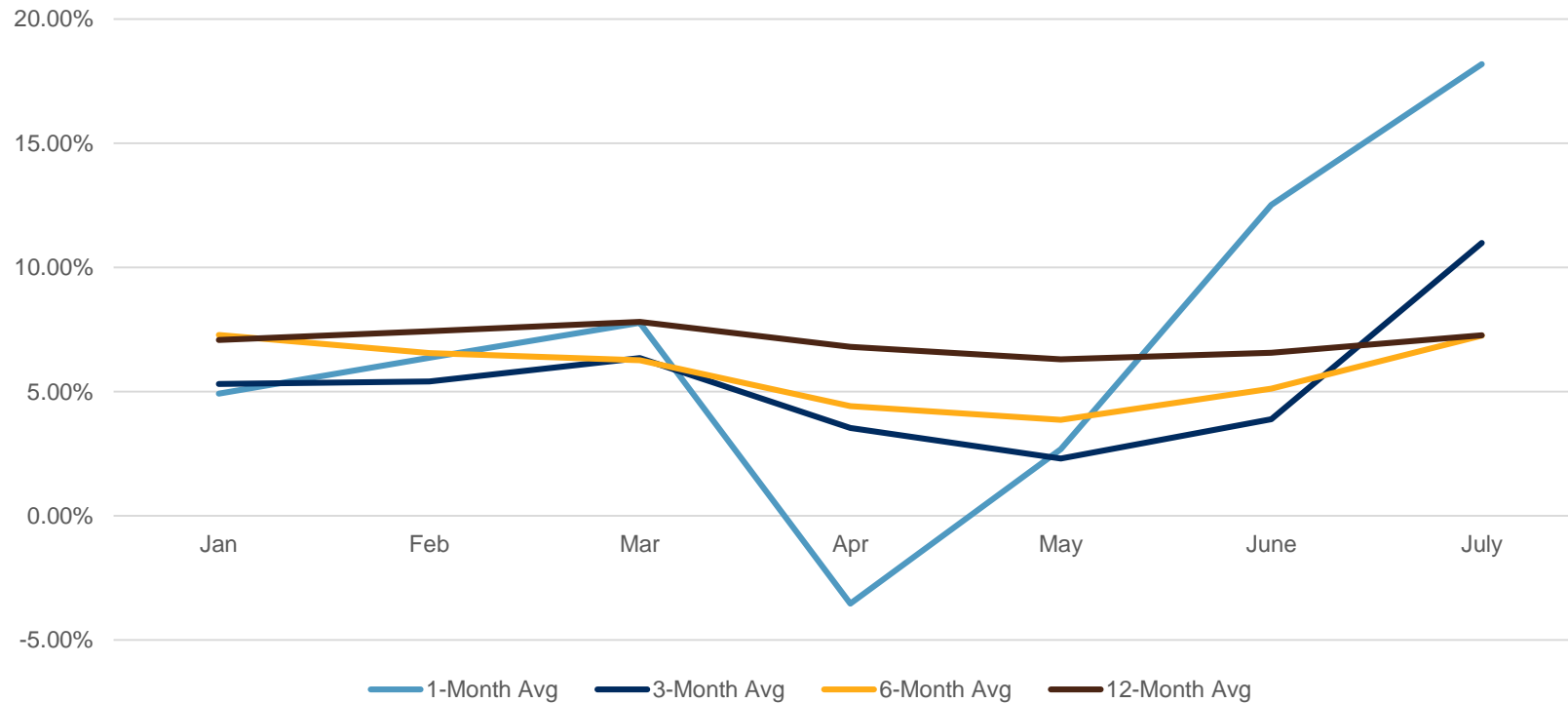
Top 5 Originators YTD 2020	Segment	Count	Amount (\$Bil.)	Percent of Total
Santander Consumer USA Inc.	Subprime	7	\$7.35	12.38%
Toyota Motor Credit Corp.	Foreign Captive	4	\$6.27	10.55%
American Honda Finance Corp.	Foreign Captive	3	\$5.00	8.42%
Ford Motor Credit Co. LLC	Domestic Captive	3	\$4.57	7.69%
CarMax Business Services LLC.	Prime	3	\$4.05	6.82%

Top 5 Originators YTD 2019	Segment	Count	Amount (\$Bil.)	Percent of Total
Santander Consumer USA Inc.	Subprime	7	\$7.40	11.28%
Toyota Motor Credit Corp.	Foreign Captive	4	\$6.25	9.53%
American Honda Finance Corp.	Foreign Captive	4	\$5.58	8.51%
CarMax Business Services LLC.	Prime	3	\$4.37	6.66%
Ford Motor Credit Co. LLC	Domestic Captive	3	\$3.98	6.08%

Source: S&P Global Ratings

Auto Lease ABS – Residual Performance

Auto Lease ABS Residual Value Gain / (Loss)



Source: S&P Global Ratings

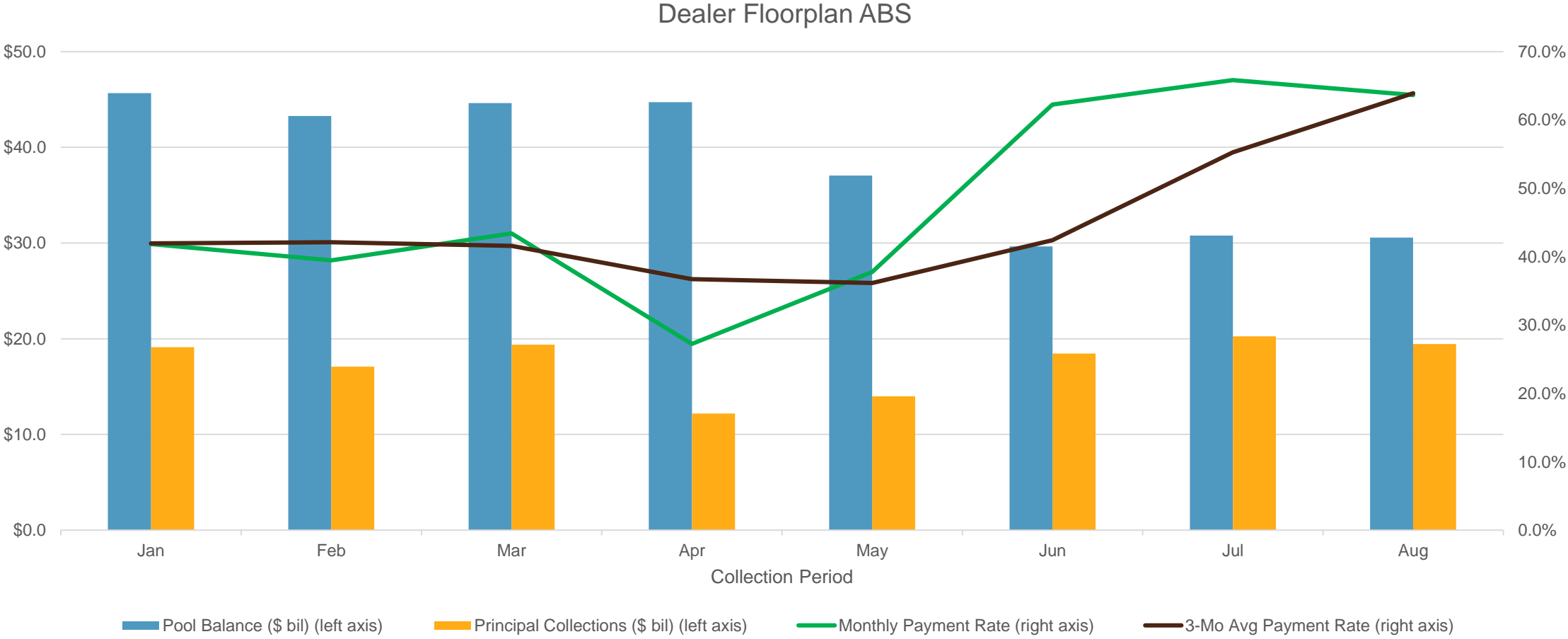
U.S. Auto Lease ABS – Outlook

- Auto lease ABS volume expected to be approx. \$17.0bn - \$19.0bn, down slightly from last year
- September year-to-date volume at \$16.2bn, nearly flat year-over-year

Top 5 Originators YTD 2020	Count	Amount (\$Bil.)	Percent of Total
GM Financial	3	\$4.11	25.34%
Nissan Motor Acceptance Corp.	2	\$2.53	15.63%
Mercedes-Benz Financial Services USA LLC	2	\$2.52	15.57%
Ford Motor Credit Co. LLC	2	\$2.51	15.49%
Hyundai Lease Titling Trust.	2	\$1.92	11.87%

Source: S&P Global Ratings

Dealer Floorplan ABS – Performance



Source: S&P Global Ratings

Related Research

- [Pace Of New U.S. Auto Loan ABS Extensions Continued To Decline In July, But Delinquencies Inched Up, Sept. 22, 2020.](#)
- [To Pay or Not To Pay: Navigating Through U.S. ABS Auto Loans As They Roll Off Extension Status, Aug. 14, 2020](#)
- [U.S. Auto Loan ABS Tracker: July 2020 Performance, Sept 09, 2020](#)
- [U.S. Auto Loan ABS Tracker: June 2020 Performance \(Quarterly vintage performance included\) August 14, 2020](#)
- [Thirteen Ratings Affirmed and Six Downgraded From Ford Credit Floorplan Master Trust, Aug 14, 2020](#)
- [Twenty-seven Ratings From 20 U.S. Subprime Auto ABS Transactions Remain On CreditWatch Negative, Aug. 10, 2020](#)
- [Various Rating Actions Taken on Six CPS Transactions, Aug 7, 2020](#)
- [Though Still Elevated, Drops In May Extensions Are The First Signs Of A Possible Road To U.S. Auto Loan ABS COVID-19 Recou July 16, 2020](#)
- [Two Ratings On Ford Credit Auto Lease Trust 2020-A Affirmed, One Lowered, July 9, 2020](#)
- [Will Spring U.S. Auto Loan Extensions Bring Summer Payments? June 4, 2020](#)
- [Thirty-Three U.S. Subprime Auto ABS Ratings From 26 Transactions Placed On CreditWatch Negative, May 12, 2020](#)

Auto Finance – Better than expected so far but risks remain

Dio Mejia, Associate Director- Nonbank Financials

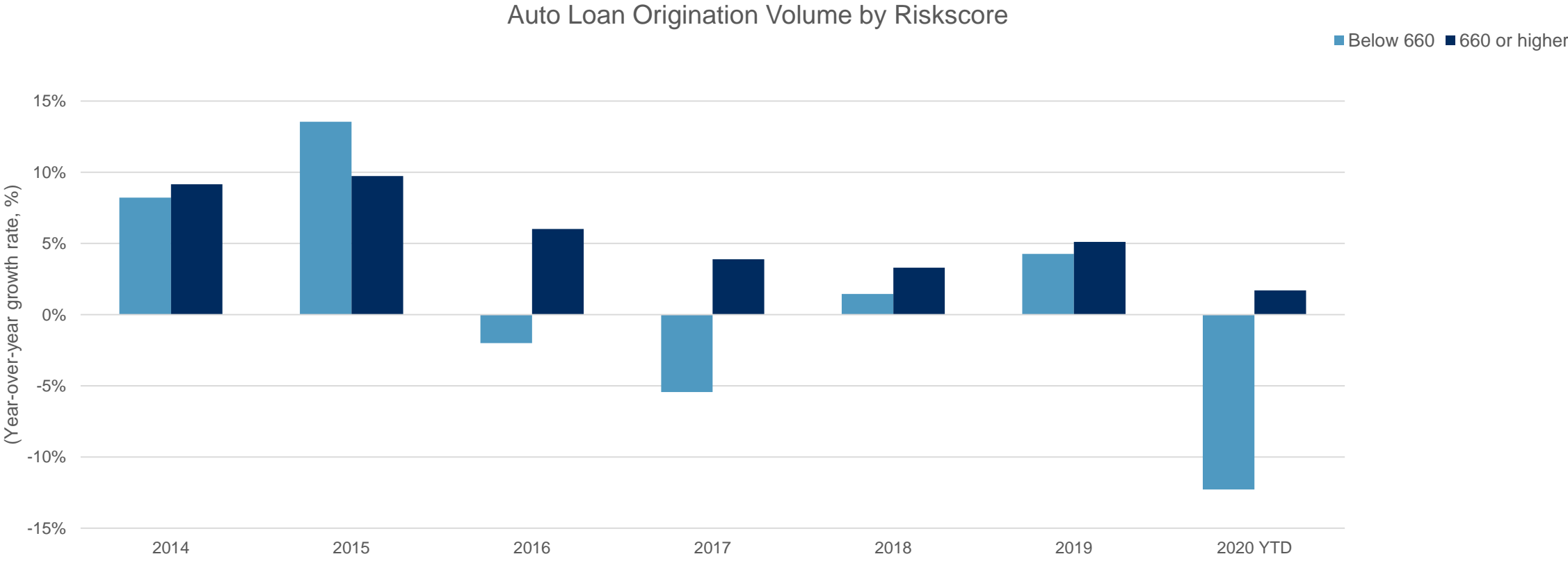
October 2020



S&P Global
Ratings



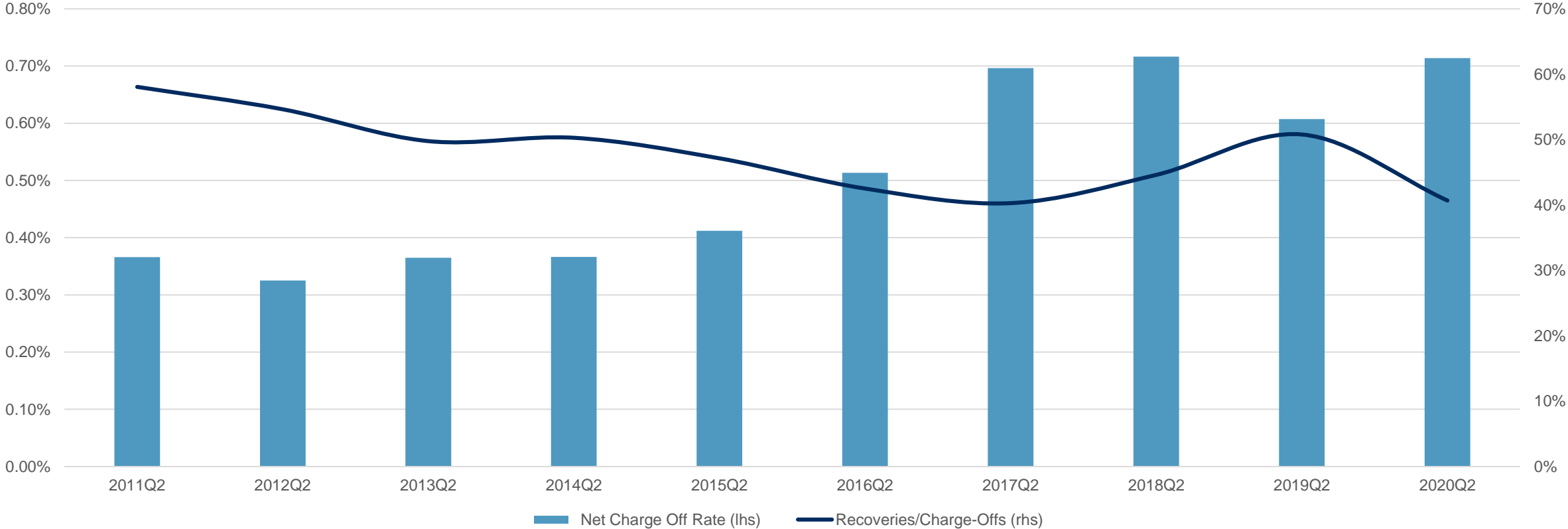
Originations Are Down, Particularly In Subprime



New York Fed Consumer Credit Panel/Equifax

Used Car Prices Should Boost Recoveries In 2H 2020

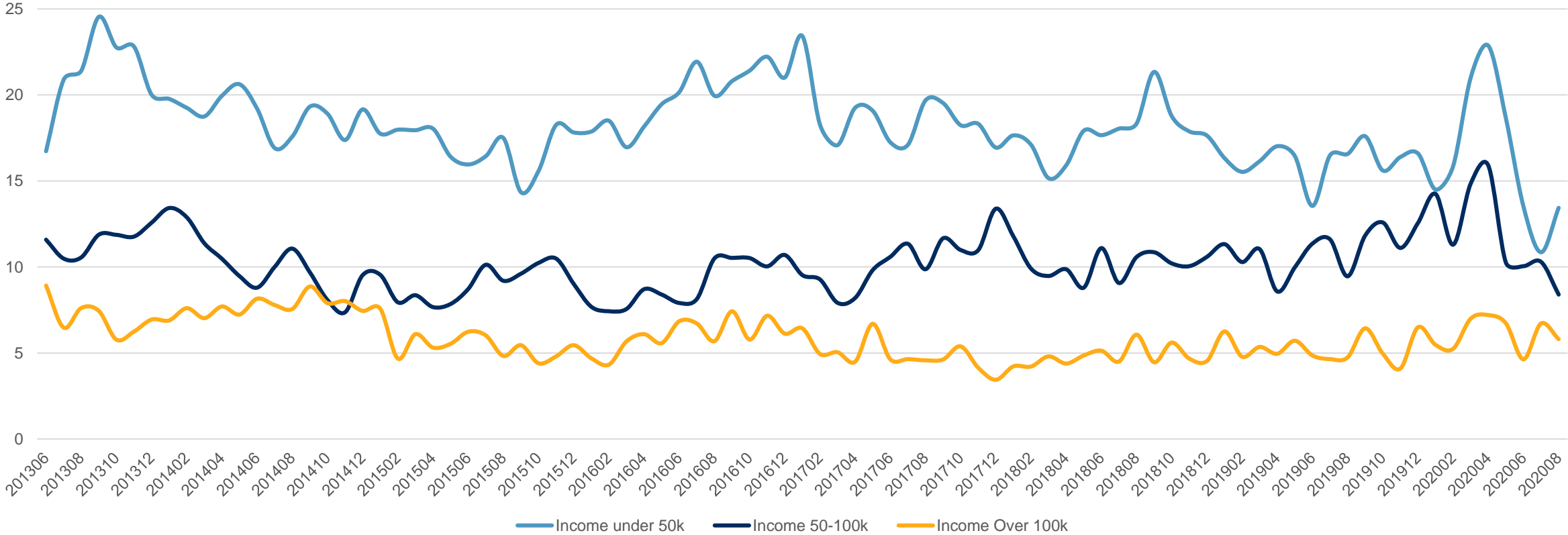
Auto Loan Recovery & Net Charge-Offs



FDIC

Consumer Expectations Around Delinquencies Have Improved Dramatically

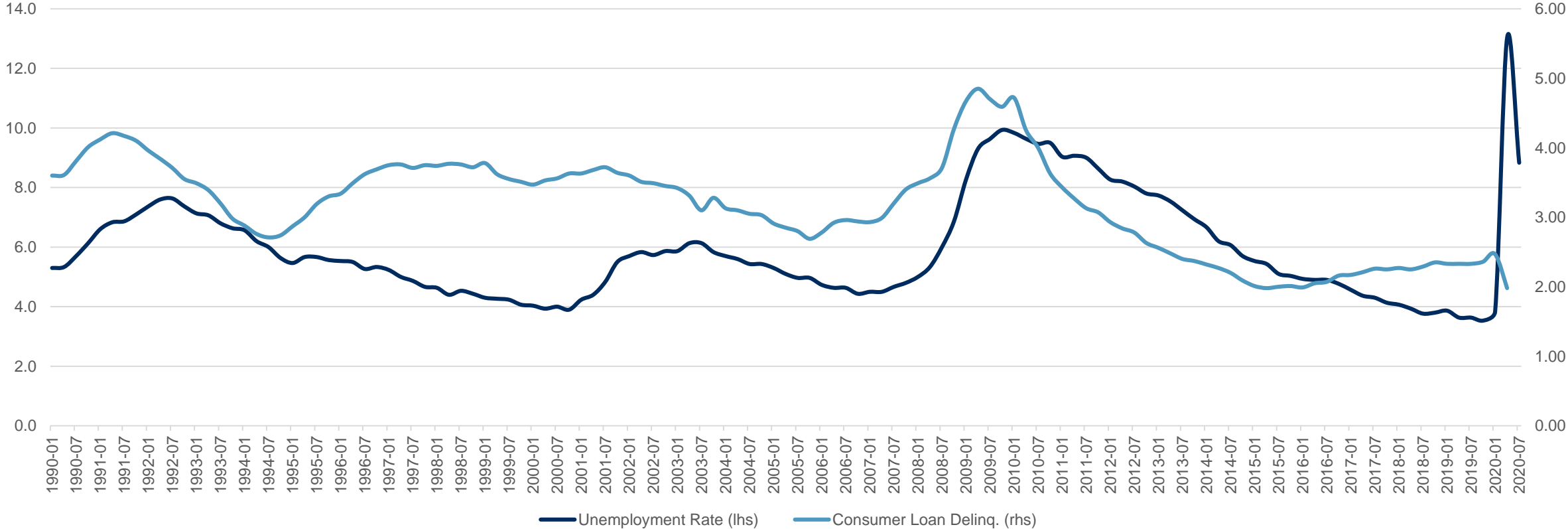
Consumers expecting to miss a minimum debt payment in next 90 days



Survey of Consumer Expectations, Federal Reserve Bank of New York

Historical Trend Indicates There Could Be Material Credit Deterioration

Unemployment & Consumer Delinquency



Federal Reserve Economic Data

Rating actions taken

- **Ally (BBB-/Neg)**
 - Outlook revised to Negative along with other consumer focused banks (May 4th, 2020)
 - **Credit Acceptance (BB/Neg)**
 - Outlook revised to Negative (May 8th, 2020)
 - **DriveTime Automotive Group (B-/Neg)**
 - Downgraded to CCC+, Negative outlook (April 6th, 2020)
 - Upgraded to B-, Negative outlook (October 6th, 2020)
- **Actions on Captives were taken in accordance with associated actions on parent OEM**

Source: S&P Ratings

Capital Markets Access

IG issuers have accessed both ABS and bond markets

- Ally issued a 3-year \$750 million Unsecured Bond at a coupon of 1.45% in September compared to a 5-year \$750 million issuance in April issued at 5.80%
- Captives have opportunistically accessed both the ABS and bond markets

HY issuers have tended to issue in ABS where yields are more attractive

- Credit Acceptance (BB/Negative) and DriveTime Automotive Group (B-/Negative) have both accessed the ABS markets since May at attractive rates
- DriveTime has also called \$400 million in senior secured notes due 2021

Source: S&P Global Ratings

Thank You

Please participate in our post-event survey. We appreciate your feedback.



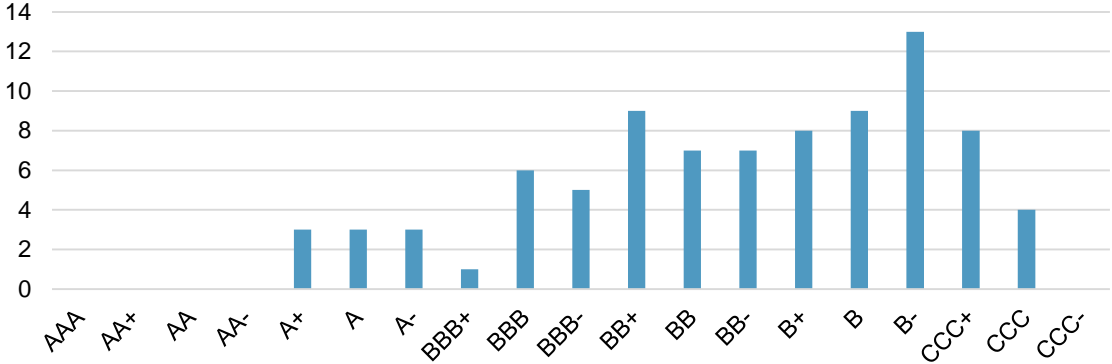
S&P Global
Ratings

Appendix

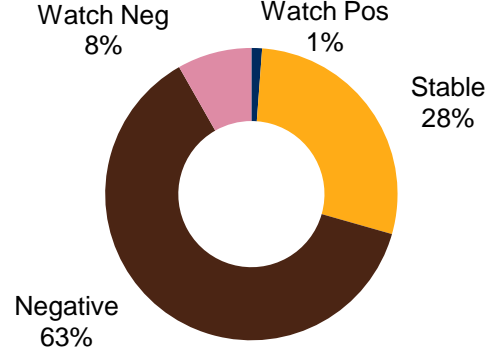
Most Rating Outlooks In The Auto Industry Remain Negative

Coverage of 120+ issuers globally (Light Vehicles and Truck OEMS and Auto Suppliers)

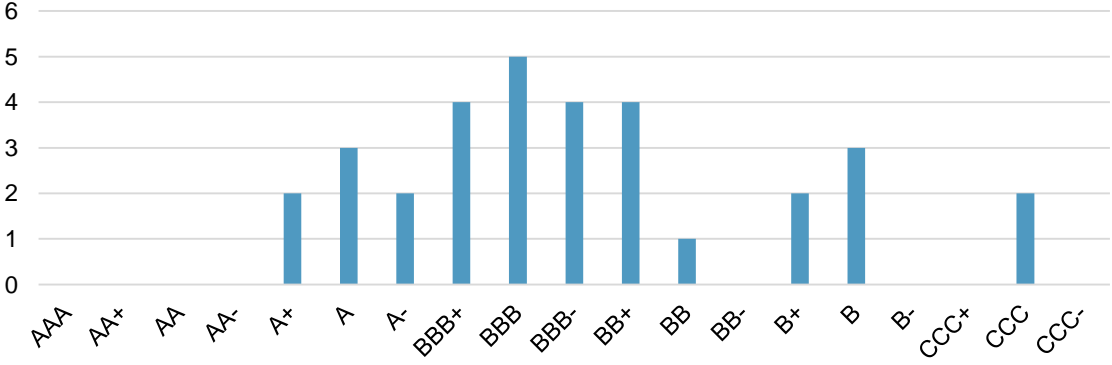
Auto Suppliers' Rating Distribution



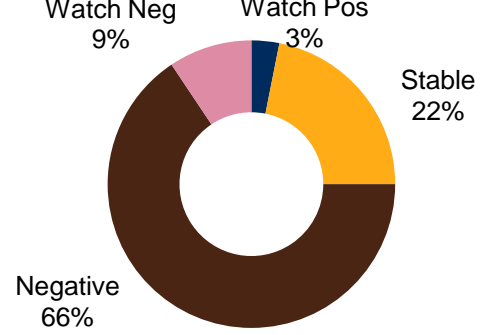
Auto Suppliers' Outlook Distribution



Auto OEM and Truck Makers' Rating Distribution



OEM and Truck Makers' Outlook Distribution



Ratings as of September 15, 2020. Source: S&P Global Ratings

Auto OEMs - Ratings List And Rating Actions Since January 2020

Company	Region	Rating	Outlook/Credit Watch	Rating actions since Jan 1, 2020
Toyota	APAC	A+	Negative	Downgraded & Outlook Changed To Negative
PACCAR	North America	A+	Stable	-
BMW	EMEA	A	Negative	Downgraded
China FAW	APAC	A	Negative	Outlook Changed To Negative
Dongfeng Motor	APAC	A	Negative	Outlook Changed To Negative
Honda	APAC	A-	Negative	Downgraded & Outlook Changed To Negative
Daimler	EMEA	BBB+	Negative	Downgraded
Hyundai	APAC	BBB+	Negative	Outlook Changed To Negative
Kia	APAC	BBB+	Negative	Outlook Changed To Negative
Volkswagen	EMEA	BBB+	Negative	Outlook Changed To Negative
General Motors	North America	BBB	Negative	Outlook Changed To Negative
Beijing Automotive	APAC	BBB	Negative	Downgraded
Scania	EMEA	BBB	Stable	Downgraded & Outlook Changed To Stable
Traton	EMEA	BBB	Stable	-
BAIC Motor	APAC	BBB	Negative	Downgraded
Nissan	APAC	BBB-	Negative	Downgraded
Geely Automobile	APAC	BBB-	Watch Neg	CW Neg Placement
Peugeot	EMEA	BBB-	Negative	Outlook Changed To Negative
Zhejiang Geely	APAC	BBB-	Watch Neg	CW Neg Placement
Ford	North America	BB+	Negative	Downgraded & Outlook Changed To Negative
Renault	EMEA	BB+	Negative	Downgraded
FCA	EMEA	BB+	Watch Pos	-
Volvo Car	EMEA	BB+	Stable	Outlook Changed To Stable
Mitsubishi	APAC	BB	Negative	Downgraded & Outlook Changed To Negative
Piaggio & C.	EMEA	B+	Negative	Downgraded & Outlook Changed To Negative
Tesla	North America	B+	Stable	Upgraded
Jaguar Land Rover	EMEA	B	Negative	Downgraded
Tata Motors	APAC	B	Stable	Downgraded & Outlook Changed To Stable
Navistar International	North America	B	Watch Neg	CW Neg Placement
McLaren	EMEA	CCC	Negative	Downgraded
Aston Martin	EMEA	CCC	Negative	Downgraded

Auto Suppliers - Ratings List (IG) And Rating Actions Since Jan. 2020

Company	Country	Rating	Outlook/Credit Watch	Rating actions since Jan 1, 2020
Denso	APAC	A+	Negative	Downgraded & Outlook Changed To Negative
Toyota Industries	APAC	A+	Negative	Downgraded & Outlook Changed To Negative
Robert Bosch	EMEA	A+	Negative	Downgraded
Aisin Seiki	APAC	A	Negative	Downgraded & Outlook Changed To Negative
Bridgestone	APAC	A	Stable	-
Sumitomo Electric Industries	APAC	A	Stable	-
Harman International Industries	North America	A-	Negative	Downgraded & Outlook Changed To Negative
Michelin	EMEA	A-	Negative	Outlook Changed To Negative
Magna International	North America	A-	Negative	Outlook Changed To Negative
Hyundai Mobis	APAC	BBB+	Negative	Outlook Changed To Negative
Continental	EMEA	BBB	Negative	Downgraded & Outlook Changed To Negative
Aptiv	North America	BBB	Negative	Outlook Changed To Negative
Hankook Tire & Technology	APAC	BBB	Stable	-
Johnson Electric Holdings	APAC	BBB	Stable	-
Autoliv	North America	BBB	Stable	Downgraded & Outlook Changed To Stable
BorgWarner	North America	BBB	Negative	Downgraded & Outlook Changed To Negative
GKN Holdings	EMEA	BBB-	Negative	-
Lear	North America	BBB-	Negative	Outlook Changed To Negative
Nexteer Automotive	APAC	BBB-	Negative	Outlook Changed To Negative
Yanfeng Global Automotive Interior Systems	APAC	BBB-	Negative	Outlook Changed To Negative
AutoNation	North America	BBB-	Negative	Outlook Changed To Negative

Auto Suppliers - Ratings List (NIG) & Rating Actions Since Jan. 2020

Company	Country	Rating	Outlook/Credit Watch	Rating actions since Jan 1, 2020
Valeo	EMEA	BB+	Stable	Downgraded & Outlook Changed To Stable
Schaeffler	EMEA	BB+	Stable	Downgraded & Outlook Changed To Stable
ZF	EMEA	BB+	Negative	Downgraded
Metalsa	LATAM	BB+	Stable	-
Nemak	LATAM	BB+	Negative	Outlook Changed To Negative
Sensata Technologies	North America	BB+	Negative	Outlook Changed To Negative
Group 1 Automotive	North America	BB+	Negative	Outlook Changed To Negative
Asbury Automotive	North America	BB+	Negative	Outlook Changed To Negative
Lithia Motors	North America	BB+	Negative	Outlook Changed To Negative
Faurecia	EMEA	BB	Stable	Downgraded
Dana	North America	BB	Negative	Outlook Changed To Negative
LKQ	North America	BB	Stable	-
Meritor	North America	BB	Negative	Outlook Changed To Negative
SMRP	EMEA	BB	Stable	Downgraded
Tupy	LATAM	BB	Negative	Outlook Changed To Negative
Penske Automotive	North America	BB	Negative	Outlook Changed To Negative
Gestamp	EMEA	BB-	Stable	Downgraded
Cooper Tire & Rubber	North America	BB-	Stable	Downgraded
Visteon	North America	BB-	Negative	Downgraded
Delphi Technologies	North America	BB-	Watch Pos	CW Pos Placement
TI Fluid Systems	North America	BB-	Negative	Outlook Changed To Negative
IAA Spinco	North America	BB-	Stable	-
Sonic Automotive	North America	BB-	Stable	-
Wabash National	North America	B+	Stable	Downgraded
Stoneridge	North America	B+	Negative	Downgraded & Outlook Changed To Negative
American Axle & Manufacturing Holdings	North America	B+	Watch Neg	Downgraded & CW Neg Placement
Goodyear Tire & Rubber	North America	B+	Watch Neg	Downgraded & CW Neg Placement
Adient	North America	B+	Negative	-
Gates Global	North America	B+	Negative	Outlook Changed To Negative
Ken Garff	North America	B+	Stable	-
Novem	EMEA	B+	Negative	Outlook Changed To Negative
Garrett Motion	EMEA	B	Watch Neg	Downgraded & CW Neg Placement

Auto Suppliers - Ratings List (NIG) & Rating Actions Since Jan. 2020

Company	Country	Rating	Outlook/Credit Watch	Rating actions since Jan 1, 2020
KAR Auction Services	North America	B	Watch Neg	Downgraded & CW Neg Placement
Tenneco	North America	B	Negative	Downgraded
Autokiniton US Holdings	North America	B	Watch Neg	Downgraded & CW Neg Placement
Commercial Vehicle Group	North America	B	Negative	Outlook Changed To Negative
Rough Country	North America	B	Stable	-
Superior Industries International	North America	B	Negative	-
Trico Group	North America	B	Negative	Outlook Changed To Negative
UC Holdings	North America	B	Watch Neg	CW Neg Placement
EnTrans International	North America	B-	Negative	Downgraded
NN	North America	B-	Watch Dev	Downgraded & CW Dev Placement
Cooper-Standard Holdings	North America	B-	Negative	Downgraded
Kongsberg	EMEA	B-	Negative	Downgraded
Grupo Antolin	EMEA	B-	Negative	Downgraded
Wheel Pros	North America	B-	Stable	Downgraded & Outlook Changed To Stable
Wand NewCo	North America	B-	Negative	Downgraded & Outlook Changed To Negative
Holley Purchaser	North America	B-	Stable	-
Truck Holdings	North America	B-	Stable	-
Parts Holding	EMEA	B-	Negative	Downgraded
FleetPride	North America	B-	Negative	Outlook Changed To Negative
Dealer Tire	North America	B-	Negative	Downgraded
TPro Acquisition	North America	B-	Negative	Outlook Changed To Negative
Adler Pelzer	EMEA	CCC+	Stable	Downgraded & Outlook Changed To Stable
GC EOS Buyer	North America	CCC+	Negative	Downgraded
Pearl Holding	APAC	CCC+	Negative	Downgraded
Dayco	North America	CCC+	Negative	Downgraded & Outlook Changed To Negative
PT Gajah Tunggal	APAC	CCC+	Negative	Downgraded & Outlook Changed To Negative
American Tire Distributors	North America	CCC+	Stable	Downgraded
Accuride	North America	CCC+	Negative	-
Carvana	North America	CCC+	Stable	-
Bright Bidco	EMEA	CCC	Negative	Downgraded
K&N	North America	CCC	Negative	Downgraded
USF Holdings	North America	CCC	Watch Neg	Downgraded & CW Neg Placement
SK HoldCo	North America	CCC	Negative	Downgraded

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.spcapitaliq.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

Australia: S&P Global Ratings Australia Pty Ltd holds Australian financial services license number 337565 under the Corporations Act 2001. S&P Global Ratings' credit ratings and related research are not intended for and must not be distributed to any person in Australia other than a wholesale client (as defined in Chapter 7 of the Corporations Act).

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

spglobal.com/ratings